"DRUG UTILISATION STUDY IN OPHTHALMOLOGY OUTPATIENTS DURING COVID PANDEMIC IN A TERTIARY CARE TEACHING HOSPITAL IN DELHI NCR"

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TABLE OF CONTENTS

S. NO	CONTENTS	PAGE NO.
1	Introduction	1
2	Review of literature	5
3	Aims and Objectives	20
4	Materials and Methods	21
5	Observations & Result	24
6	Discussion	49
7	Conclusion and Summary	57
8	Bibliography	59
9	Annexures: Annexure-1: Case Record Form Annexure-2: Ethical Clearance Certificate Annexure-3: Data Masterchart Annexure -4:Plagiarism check Report Annexure -5: Modified Kuppuswamy Scale Annexure -6: Key to Abbreviations	69-82

INTRODUCTION

The World health organization (WHO) has defined Drug Utilisation Research as the marketing, distribution, prescription, and use of drugs in a society, with special emphasis on the resulting medical, social and economic consequences. This definition was given by WHO in 1977.(1)

Drug Utilisation Study is an essential part of Pharmacoepidemiology that describes the extent, nature, and determinants of drug exposure with the purpose to facilitate the rational use of drugs in the population. As the science of Pharmacoepidemiology deals with the interactions between drugs and humans , in real conditions of life, advantages , adverse effects and use of drugs , it gives a vital input in drug use monitoring.

Drug therapy is the predominant aspect of patient care in health care settings. The community is exposed to a wide range of pharmaceutical products with a variety of brand names , which are available many times, at an unaffordable cost. The irrational and inappropriate use of drugs in health care, all over the world, is a big concern.Therefore, drug utilisation studies play an essential role in providing information about the prescribing practices, the factors that influence prescribing practices, occurence of adverse drug effects , non-compliance with the treatment regimens, and cost-effectiveness of drugs.(1), as mentioned in the study done by Pradeep Jadhav et al. The information obtained from drug utilization studies is used to inform drug formularies and guidelines .Monitoring medication use against standard treatment guidelines give an insight into the current prescribing trends. Also, drug utilisation studies provide a channel to regulate the use of controlled medicines or check the impact of the quality-driven programs and the effect of interventions. In addition to this, they can be used to educate drug prescribers about the appropriateness of use of medicines in special populations, for example, elderly with renal or hepatic diseases or geriatric problems and with multiple chronic diseases.(2).[reference taken from study by Sarfaraz Mohammad et al].

Such studies have also been used to understand drug use patterns in pregnant women and children. In pregnant women they provide important information on the timing (trimester), dose, and duration of medicine use in pregnancy, which are very important factors with respect to causing foetal toxicity. Drug utilisation studies in paediatric population have received attention from both the US Food and Drug Administration and the European Medicines Agency (EMA) because of increasing concerns about the scarcity of research related to efficacy and safety of medicines use in this age group.(2)

Ophthalmology is a branch of medicine which has incoming advances and introduction of many new medicines , that must be reviewed periodically. Various different classes of drugs are used for the purpose of diagnosis, or interventions or for the treatment of all kinds of ophthalmologic diseases. Loss of vision and many other ocular complications can be avoided with the optimum use of drugs. Whatever drug utilisation studies are available, they show that globally and in many developing countries like India polypharmacy, prescribing costlier drugs , irrational antibiotic usage is very common and on the other hand , the use of generic drugs and drugs from National or WHO essential drug formulary is very less.(3), as mentioned in study by Hardik Vanya et al. Considering these facts , this study was designed to get knowledge on the prescribing pattern and drug utilisation trend in Ophthalmology department at a tertiary care teaching hospital with the purpose to promote rational use of drugs among prescribers.

Rational drug use (RDU) means an appropriate prescribing of drugs, an appropriate dispensing of drugs and an appropriate patient use of medicines for the purpose of diagnosis, prevention, and treatment of diseases. It is described as a safe and cost-effective use of drugs. According to RDU the patient must get medicines appropriate to the health conditions, must be given at optimum doses and for the sufficient time, and also at the cost which is easily affordable by the individual and the community .(4,5) as mentioned in the study done by Mekonnen Sisay et al. The objective is to provide a good quality of pharmaceutical care, to minimize the cost of treatment , to avoid the adverse drug reactions and harmful drug interactions, to maximize the results of therapies and to facilitates patient adherence.

WHO in collaboration with International Network of Rational Use of Drugs Organization (INRUD) had developed core and complementary drug use indicators with the purpose of evaluation of drug use in healthcare settings. Amongst these , the core drug use indicators are considered as the first line indicators.(6) The core drug use indicators are more informative, better feasible, more consistent with time and place and also easier to measure drug use as compared to the complementary indicators. Hence, the core indicators have been selected for the quantitative evaluation of RDU. The three main categories of core drug use indicators are as follows , prescribing indicators (average number of drugs per encounter; percentage of drugs prescribed in generic form ; percentage of encounters with antibiotics, percentage of encounters with injections and percentage of drugs prescribed from EDL) patient care indicators (average time for consultation , average time for dispensing , percentage of drugs which are actually dispensed to the patients , percentage of drugs that are properly labelled and knowledge that patient has as to how to take the drug), and health facility indicators (availability of the essential drugs, availability of STGs, formularies and EDLs) . (4,5,6)

WHO has given estimates that more than half of all drugs are prescribed against the criteria of Rational Drug Use and more than half of the patients also fail to adhere to the prescribed regimens . Common factors responsible for this include:- lack of sufficient information about the prescribed drugs, improper and inadequate training of medical graduates, health care providers and patients having lack of communication between them , paucity of diagnostic facilities, also the patient demanding drugs (assuming that 'every ill has a pill'), and a defective drug supply system .

The Irrational Drug Use has a prominent negative effect on health care costs, the quality of pharmaceutical care and development of antimicrobial resistance.(7,8) Other impacts are the increased risk of adverse drug effects , drug interactions and poor compliance of patients with the treatment.

Covid 19 pandemic has affected the human population in totality. The virus caused involvement of different organ systems of the body , including eyes. There are many studies done by various Ophthalmologists ,in different countries that have shown multiple types of ophthalmic involvement in Covid infected patients.(9,10) The biggest challenges to treat in these patients are inflammation and infection.All degrees of Conjunctivitis, keratitis, uveitis, lid inflammation and inflammation of various structures of eyes are seen.(11) according to a study done by Mrittika Sen et al. According to a survey by National Health Institute , United States , Acute Conjunctivitis is found in 1-3% of patients infected with Covid 19. The virus affects eyes by direct invasion of the tissues or by triggering the systemic inflammatory reaction , in which the inflammatory markers are profoundly increased. As the numbers of cases of Ophthalmic involvement have risen with the onset of Covid Pandemic, the use of anti-inflammatory drugs and antibiotics as well as anti-viral drugs have also increased markedly . Polypharmacy is practiced very commonly, which in turn , increases the risk of drug interactions and adverse effects.(12,13) The use of broad spectrum antibiotics is common .The wide use of antibiotics causes the increase in incidence of antimicrobial resistance , and this is a major global health concern.(14,15). The more and more use of antibiotics, which can many times be irrational and inappropriate , is directly linked to the emergence of more resistant strains. Also, this increases the total cost of prescription which is not easily affording for a big proportion of the population of a developing country like India.

During Covid pandemic, as there has been a tremendous rise of inflammatory conditions of eyes, the use of anti-inflammatory drugs (Non steroidal anti-inflammatory and steroidal

inflammatory) has increased significantly.(16,17)The inflammatory disorders of eyes like conjunctivitis, keratitis, uveitis, blepharitis and dacryo-cystitis , stye, pterygium , chalazion etc. are now common with Covid infection.(16,18 19,20) The excessive and prolonged use of topical antibiotics and anti-inflammatory drugs can lead to histological and structural changes in ocular tissues , can cause local irritation, corneal ulcers, and systemic effects like worsening of bronchial asthma.(7) as also mentioned in study by Hina Kauser et al. Thus, in order to improve drugs therapeutic efficacy, to minimise adverse effects, and delay development of resistance , studies of drug utilisation trends and patterns are the key.

Developing countries have limited resources in healthcare and drugs and therefore it is very important to prescribe rationally so that the available resources can be utilised optimally. And drug utilisation studies give an insight into the prevalent situation of drug use in a healthcare setting at all levels and ensure the safety and health of the population of the country.

The chances of development of adverse effects increases with the consumption of many drugs together . Polypharmacy must be discouraged. Drug interactions also increase with many drugs prescribed together. Adverse effects occur more with polypharmacy, more in elderly population.(21) A review analysis done in 2021 revealed that 28% of Indian adult population suffers because of polypharmacy.

Cost of treatment is one of the most important factor to be considered in patient care. High costs of medicines has led to decreased access to healthcare .There is a wide variation in the market prices of the medicines in India due to lack of a price control policy of the Government . The economically middle and lower class of the society is spending a big proportion of the earnings on the drugs only instead of food and other essentials. A survey found that 60-90% of the healthcare expenditure by poor is on medicines.(22) as mentioned in study done by Vandana Roy et al. Also, Sixty per cent (499-649 million) of the population in India has no regular access to essential medicines. This is despite the fact that India produces 8 per cent of the medicines of the global market and 80% of the health care in outpatient here is provided by private health sector.(22) The monopoly of pharmaceutical companies on some products in the market , less popularity of generic drugs, physician's choice influenced by various means , physician's lack of knowledge regarding cost effective treatment options available, are the reasons for more use of costlier, branded drugs.(23)

Between physician and patient prescription is an important therapeutic document , as it reveals the diagnostic accuracy and therapeutic proficiency of physician with instructions for patient's good health. The prescription orders may become therapeutically useless ,if they fail to

communicate clearly with pharmacist and to sufficiently instruct patients on how to take prescribed medication .Prescriptions are medico-legal documents which should be written legibly, accurately and completely .(25,26)Moreover, a good and complete prescription is very important for minimizing errors in dispensing medication and also as it adheres to guidelines for prescription writing with regard to patient's health .

Since prescribing is one of the daily tasks in general practice, there is a surplus evidence of poor prescribing world over . It is evident that prescription errors account for 70% of medication errors that patients suffer from.

WHO and International Network for Rational Use of drugs (INRUD) have applied themselves to evolve standard drug use indicators as follows –

1. Average number of drugs per encounter
2. Percentage of drugs prescribed by generic name.
3. Percentage of encounters with antibiotics prescribed.
4. Percentage of encounters with an injection prescribed.
5. Percentage of drugs prescribed from WHO Essential Drug List.

Since the onset of Covid pandemic, there have been a few studies on the trends and patterns of drug utilisation . A few studies done in India are available. Disease profile, presentations and outcomes in Ophthalmology, like other fields, have been changing in Covid times, so, drug use pattern needs to be assessed and reviewed more extensively , which will ensure that the resources are utilised rationally , problems like antibiotic resistance will be handled more carefully and the patient's safety is guaranteed.

The present study is conducted to give an insight into the prescription practices in Ophthalmology outpatients at our centre (a tertiary care teaching hospital) and to give emphasis on rational utilisation of drugs to ensure the good health and safety of the patients, with optimal expenditure on drugs. The prescriptions of outpatient department only were included in the study as the rate of hospital admissions and interventional procedures was quite low because of the patient hesitancy as well as the infection control and prevention step taken by health professionals , since the onset of pandemic . Thus, in order to obtain a good sample size of patients for the study Outpatient Department was chosen the study setting.

REVIEW OF LITERATURE

Drug Utilisation Research has been defined by World Health Organization as the marketing, distribution, prescription, and use of drugs in a society, with special emphasis on the resulting medical, social, and economic consequences.(1) It is a vital component of pharmacoepidemiology which describes the extent, nature, and determinants of drug exposure with an objective to facilitate the rational use of drugs in the population. The inappropriate use of drugs results in a potential health hazard to the patients and also increases the financial burden. This increases the need of the practice of rational prescription and use of drugs. The five main criteria for rational use of drugs are accurate diagnosis, proper prescribing, correct dispensing, suitable packing and patient adherence.(4,5)

Drug therapy is the main component of patient care in health care system. The community is loaded with innumerable pharmaceutical products with different brand names , available sometimes at an unaffordable price.(2,3). Irrational and inappropriate use of drugs in health care system is a big concern. Physicians hastily accept and indiscriminately use newly developed expensive and broad spectrum antibiotics.This contributes to high rates of antimicrobial resistance and cost of health care.

Drug utilisation pattern needs to be evaluated from time to time so as to increase therapeutic efficacy of drugs and decrease incidence of adverse effects .(6) Since time immemorial, the pharmaceutical and medical profession have sacrificed adequate time and efforts for the development and rational utilisation of safe and effective drugs to be used in the treatment and prevention of illness.

It is possible to cure or provide the symptomatic control of many clinical disorders because of the development of new therapeutic agents. However, in many circumstances drugs are not used rationally for optimal benefits and safety.

Realizing the importance of drug utilisation studies in the promotion of rational drug therapy, international agencies like WHO and International Network of Rational Utilisation of Drugs (INRUD) have together defined standard drug use indicators and data collection methods.(4,5,6) Auditing prescription also is a part of drug utilisation studies.

Recently in the discipline of Ophthalmology, there have been many drug developments and introduction of newer ocular therapeutic agents. Antibiotics are commonly prescribed for many ophthalmic diseases. Evidences are there which show the emerging resistance to different class of antibiotics which are being used in ocular therapy.(3,7) Excessive and prolonged use of topical antibiotics and nonsteroidal anti-inflammatory drugs may lead to histological and structural changes in conjunctiva and all ocular tissues.(7). Therefore, to improve drugs therapeutic efficacy, to minimize adverse effects, and delay development of resistance, periodic evaluation of drug utilisation trends is must.

The costs of medical care and benefits and risks associated with drug use have undergone a tremendous increase, making time to time identification of drug usage pattern extremely important .The majority of similar studies showed that physicians do not adhere to the guidelines marked by regulatory agencies, thus leading to the irrational use of medicines. This leads to increased chances of failure of treatment , resistance to common antimicrobials and cost burden on the patient and the community as well .(13,14,15) The use of essential drugs, prescribed by the generic names, has been emphasized by National Health Policy of India and WHO as well.(5,6). The Prescription Pattern Monitoring studies give a bridge between rational drug use , pharmaco-vigilance, evidence based medicine,pharmacogenetics, eco pharmacovigilance and pharmacoeconomics . In our country, the need of the hour is to utilise the data provided by all prescription pattern monitoring studies done in different states and on different drugs , to fulfill the main aim of promoting rational use of drugs.

The prime purpose of drug utilisation research is to assess whether drug therapy is rational or not and to throw light on the efficiency of drug use. The results of these studies then can be used to highlight the priorities for the rational distribution of health-care funds.

Pharmacoepidemiology is the study of the uses and effects of drugs in well-demarcated populations. The study may be drug oriented, putting emphasis on the safety and efficacy of individual drugs or groups of drugs, or utilisation oriented, with a target to improve the drug therapy quality by pedagogic (educational) intervention. Therefore, drug utilisation research has become a very important part of pharmacoepidemiology, and they provide insights into different aspects of drug prescribing and drug use like pattern of usage, quality of usage,and determinants.(37)

Antimicrobial resistance is a major challenge because of new resistance mechanisms which are emerging and spreading in all countries .(13,14) Emergence of antimicrobial resistance has posed a great threat to quality health care and patient safety as infections with resistant organisms are difficult to treat, they need costlier therapies , and also outcomes . The major concern is that the antimicrobial overuse can cause resistance in ocular surface bacteria ; infections then are difficult to eradicate, and this in turn, may lead to severe ocular damage and vision loss.

Hence , to deal with antimicrobial resistance updating knowledge about appropriate antimicrobial use and the development of strict protocols for their use should be implemented. Promoting awareness about drug selection from essential drug list so that the drug cost is reduced is most important .(24,25) Generic drug prescribing practice should be encouraged amongst healthcare professionals.

Without the knowledge of how drugs are being prescribed, it is impossible to comment on rational drug use or propose actions for creating better prescribing habits. Therefore, to collect information on prescribing patterns is the need of the hour for the auditing system.(26)

Pharmacoepidemiology can become a powerful tool to promote public health by giving inputs into different aspects of drug prescribing and drug usage. It helps to keep check and ensure better performance from time to time. Antimicrobials constitute a big load of the drugs used in Ophthalmology for treatment of blepharitis,iridocyclitis, acute conjunctivitis, , ophthalmia neonatorum,hordeolum ,infective corneal ulcers etc. and also for postoperative prophylaxis. The selection of the appropriate antibiotic depends on clinical diagnosis, the suspected bacteria , and its antibiotic sensitivity.

With more drugs being introduced in the market, much of misinformation and paucity of information about the rational use of antimicrobials is there. This is causing a rise in antimicrobial resistance.(27)

Very less number of drug utilisation studies have been done in Ophthalmology. A literature survey was performed , which consisted of a Medical Literature Analysis and Retrieval System Online database search and a World Wide Web search (Search engine: Google,) with the help of keywords: Drug utilisation study, Ophthalmology Department. It was revealed that very few studies have been performed in India to assess the drug utilisation pattern in Ophthalmology Out-patient Department (OPD).(33,34)

In India, the burden of infectious diseases is among the greatest in the world.To add to this, AMAs which are used to treat the infections are being used inappropriately and irrationally.(11,12) This has resulted in higher incidence of development of antimicrobial resistance. AMR (Antimicrobial Resistance) has become the point of attention as a major global health threat of the 21st century because of the present and future consequences on public health, and country's economy. AMR develops when microorganisms create cellular mechanisms to adapt and to change on exposure to antibiotics, thus making the medication ineffective. As India is the world's largest consumer of antibiotics (10.7 units per person), it possesses the biggest burden of AMR .(13) High rates of MRSA (ranging from 32–80%) were reported in different studies. A rise in MRSA from 29% of *S. aureus* isolates in 2009 to 39% in 2015 was seen in a big private laboratory network study. The past years have observed a tremendous rise in AMR in general bacterial pathogens, and ocular pathogens also .(42,43) The identification of responsible bacteria for the ocular infections is important to decide for treatment . However, it is empirical to avoid delay in treatment, selection of antibiotics to treat eye infections in clinical practice, and this depends on the most commonly encountered pathogens, pharmacokinetics of the antibiotic, dosage, and costs. The empirical treatment has caused the increase in probability of antibiotic prescription to a resistant pathogen and finally leading to treatment failure. (44,45,47). A study on the outcome of generic ciprofloxacin antibiotic eye drops in India, showed that around 20% of samples were not potent enough according to the standard advisory ranges. The antibiotic prescription pattern studies which are done in India highlighted that prescription writing errors were very common like not well defined duration of therapy, dosage form ,frequency of administration, polypharmacy. A recent analysis of prescription patterns of antibiotics in an Ophthalmology OPD in a tertiary care hospital in India showed only 1.6% of the prescriptions from the National Essential Medicines List (2015). To prescribe antibiotics in peri-operative period is a common practice among Ophthalmologist, which necessitates the practice of judicious and appropriate use of antibiotics.(47,48) Numerous antibiotic susceptibilities were seen in common ocular antibiotics in various AMR surveillance studies done in the past (49,50,51). Although there is a scarcity of largescale surveillance studies which will determine antibiotic susceptibility patterns across India. A 5-year analysis of bacteriological samples from patients with ocular infections diagnosis revealed susceptibility to moxifloxacin (98.7%) and vancomycin (97.9%) among gram-positive isolates, and to amikacin (93.5%) and gatifloxacin (92.7%) among gram-negative isolates. Past years have observed a rising trend in AMR across India.(11,12) A cross-sectional study from south India in patients with bacterial keratitis, highlighted increased ofloxacin resistance in MSSA from 11.1% in 2002 to 66.7% in 2013. (13)One more

retrospective review performed in a tertiary care center in India to study the evolving trends of MRSA ocular infections showed an increase in MRSA-associated ocular infections from 26% in 2006 to 38% in 2008. Also, long-term antibiotic resistance surveillance studies are needed to make guidelines for rationale-based decisions in antibiotic treatment of ocular infections in India. The common reasons for inappropriate use of medicines are; self-medication, antibiotics used inappropriately , polypharmacy , injection overuse and prescribing outside the clinical practice guidelines.The other causes of irrational use of medicines are knowledge, attitudes and practices of patients and practitioners, the working condition , the system of drug supply,regulations by laws , information and also misinformation regarding medicines and also the profit intentions of the pharmaceutical industry (44,45). The treatment which is not safe and effective ,the disease state when prolonged , patient's pain and distress , the high cost of treatment, chronic conditions deteriorated for example diabetes, epilepsy and neurological disorders, hypertension and antibiotic resistance are the results of the irrational medicines use .

The basic steps to limit the irrational use of medicines is to recognise the types, extent and reasons of their irrational use. In the 1990′s, WHO in collaboration with the International Network of Rational Use of Drugs (INRUD) designed standard indicators to evaluate drug use practices at healthcare settings (48,49) (which was originally developed to estimate the patterns of drug use in primary healthcare system , all these indicators were being used at tertiary healthcare facilities for same purpose. The indicators which are the "core drug use indicators" are classified into prescribing, patient-care and facility-specific indicators.

FDCs (Fixed dose Combinations) are being more commonly prescribed preparations in outpatient practice. They should be used rationally keeping in mind both the therapeutic effect and safety of patients.(95,96)

Combinations of antibiotics and steroid eye drops are undesirable for many reasons. Where not needed if antibiotic therapy is given,it has the disadvantage that the drug resistance may get developed and there is no response when actually antibiotic is needed urgently.When not indicated , if steroid therapy is given , it can aggravate the infection especially the viral infection and if used for long periods may result in cataract and glaucoma.(46,47)

Even if all the necessary precautions are taken to ensure that the medical care is available reliably and in a completely safe form during the “period of Corona lockdown”, the frequency of consultations reduced significantly. (14)

COVID-19, which has been a highly contagious virus, can ultimately cause the respiratory complications with a potentially fatal outcome. The ocular tissue which is infected and fluid may be a potential source of SARS-CoV- 2 transmission.(16,17) The risk of transmitting viral load is through respiratory droplets or contact with surfaces – especially occurs from the patient to the physician when close proximity to the patient is needed during the application of ophthalmic diagnostic equipment and procedures, for example ophthalmoscope, slit lamp or ocular manipulation. There are some ophthalmic instruments, which are used during single-patient visits and they can transmit the infection if not disinfected. The Ophthalmological society of many countries have changed their recommendations as the German Ophthalmology Society (DOG) and according to them the patients should consult an ophthalmologist if absolutely necessary and procedures that could not be postponed and therapies like IVIs or emergency interventions.(18) Prescriptions that were needed permanently, should be sent by post, this was recommended by the Federal Association of Ophthalmologists. Emergency care should be maintained.Similarly, care had to be ensured for patients for several weeks or months whose treatment was required urgently without the risk of vision loss .The publication done by the AAO(American Academy Of Ophthalmology) from 18 March 2020 notified “ Recommendations for urgent and non-urgent care ”, so that what is urgent is only provided. In addition to this, patient’s fear of catching infection , and also the restricted transport activity during ‘Lockdown Period’ have been the important factors in affecting the number of consultations in outpatient .(19,20) During lockdown, models of working from home or home schooling came into existence with an aim to increase productivity, this all was based on electronic equipments.These smart working models have resulted in new lifestyles, digital work and digital school, this forces people, both young and adult, for prolonged near visual work.This has led to ocular surface disorders, like dry eye disease. Ophthalmologists frequently come into close contact with patients during ocular examination which predisposes them to a high risk of virus transmission .Virus particles are detected in tears and ocular secretions , the controversy regarding transmission potency of droplets and aerosols during ocular checkups and surgeries have come into existence.(16,17)Adding to this, the high transmission of virus in hospitals and procedures has restricted eye care, decreased ophthalmologic procedures, and delayed elective surgeries. During the lockdown period, telemedicine has achieved more focus

and has been effective in delivering medical information.Also, education of Ophthalmology in undergraduate and residency programs now correlates better with this pandemic.(10,14)

The diagnosis distribution of patients is changed now in patients who are coming to eye OPDs. According to a Taiwan study, dry eye ,glaucoma,macular diseases, refraction errors (myopia) in children have risen during Covid pandemic.Cataract, Vitreal diseases, conjunctivitis,retinal degeneration have decreased(9). All tissues of the eye are affected by the virus, which causes different ophthalmic presentations.These presentations may develop in any stage of the disease, may be as initial symptom in COVID-19 patients (1% to 12.5%). The abnormalities of the neuro-ophthalmic type are evident after 5 days of systemic symptoms, and involvement of the ocular surface and anterior segment are seen 8.5 days after the development of the initial symptoms; posterior segment and orbital problems will come 12 days after the diagnosis of COVID-19.(11,16,17)

The occurence of eyelid, ocular surface, and anterior segment pathologies in studies has been reported at a range from 0.81% to 34.5%. Conjunctivitis is the commonest ophthalmic manifestation and is seen in different stages of the disease . It appears to be self-limiting and resolves spontaneously .Conjunctivitis can occur because of the result of multisystem inflammatory syndrome in children (MIS-C), and this is known as a Kawasaki-like condition.(16,17,20) The other ocular surface symptoms commonly found are dryness (6.9–37%), redness (10.8–24.1%), pain (10.3–31.2%), discharge (6.9–29.6%),, and foreign body sensation (6–18.5%) . A study revealed that dry eyes remained in 12% of patients even 15 days after RT-PCR SARS-CoV-2 negativity (22,23). Ophthalmic manifestations of COVID-19 where posterior segment is affected include retinal vascular abnormalities like central retinal artery occlusion (CRAO), choroiditis, retinal vein occlusion (RVO) and retinal findings. A study which was a cross-sectional study reported changes in retina in 55.6% of patients who were admitted with severe COVID-19, developed flame-shaped haemorrhages and ischemic pattern lesions like cotton wool spots and retinal sectoral pallor . Neuro-ophthalmic signs (Such as Papillophlebitis, Optic neuritis, Adie's tonic pupil) , orbital manifestations (Dacryoadenitis, Orbital cellulitis, Mucormycosis, Retro-orbital pain,and sinusitis) have been found.(11) In the paediatric population numerous studies reported the increasing rate of accidental ocular injuries as a result of contact with alcohol-based hand sanitizers (ABHSs). A study by Martin et al. in France reported that the number of ABHS-related ocular injuries in paediatric population during the pandemic had risen to 7 times compared with the previous year. Thirteen percent of the reported injuries were severe and required surgical intervention. Many preventive measures

could have been brought into practice to prevent events like replacement of ABHSs with soap and water, suitable dispensers for children (at a lower height and below the face level), and training children in using ABHSs .The impact on eye-care provided by the apex institute of the nation is being discussed, a government-funded multispecialty hospital which is providing a good-quality and affordable health-facilities to all economic classes and also serving COVID-19 patients. The present study is the first of its kind which depicts the results of the procedure of unlocking on care in Ophthalmology.

In the Apex eye care institute of India a study was done on the impact of Covid 19 pandemic induced lockdown , and what was found was a dramatic fall in total hospital out-patient load (by 97%) mainly belonging to the elderly age-group (the age reduced from 55 years to 29 years) and systemically comorbid patients ,this was the result of complete lockdown and good public compliance who did not allow elderly from going for unnecessary hospital visits(14).The unexpected delay in recovery of patients inspite of the initialization of the process of unlocking was observed. The increase in the incidence of blindness throughout the country is expected as a result of delayed ophthalmic care in the same age group and thus may worsen the ocular problems .There was a reduction in the emergency eye-care services by two-thirds and sudden rise in number of younger male patients was observed because of the sudden closure of routine outpatient services. More than two-thirds of these cases were benign and 12% went for emergency surgical intervention.

According to a prospective cross-sectional study done by Wang et al., it was brought into light that home confinement during the pandemic is associated with a significant shift towards myopia , especially in children of 6 to 8-years (approximately −0.3 diopters). The prevalence of myopia in screenings done in 2020 was much higher than the highest prevalence of myopia in 2015–2019 in the same age group , that indicates the effect of lockdown on vision. The prominent causes of progression of myopia have been attributed to increase in screen time and reduced outdoor activity .(12,16)

During this SARS-CoV-2 pandemic, many drugs were proven effective in treatment or prevention of the progression of the disease. Chloroquine/hydroxychloroquine, intravenous immunoglobulin (IVIG), systemic corticosteroids and antiviral agents were the most common. Although some of them have some ophthalmic side effects.(71,72)

In the initial days of the pandemic, chloroquine or hydroxychloroquine were the few medicines for COVID-19. The prolonged use of chloroquine or hydroxychloroquine had chances to cause retinal toxicity,which was not seen with short term use. Routine baseline ophthalmic examination is not required if appropriate doses were prescribed . Ophthalmic evaluation must be done in patients who have a past history or pre-existing maculopathy because of ophthalmic concerns after the use of these drugs mentioned earlier.(72)

Systemic corticosteroids are commonly used in COVID-19 management in cases of severe immune response, but it can cause glaucoma,cataract,and central serous chorioretinopathy. One more prominent adverse effect found in vulnerable patients is the risk of life-threatening opportunistic infections such as fungal infection (rhino-orbito-cerebral mucormycosis), and this necessitates development of a guideline for prophylactic use of antifungal medicines. IVIG used as immune modulators may result in central retinal vein occlusion (CRVO) although it is rare .(71,73)

Lopinavir and Ritonavir, are the protease inhibitor agents that have controversial effects on COVID-19, they may lead to reactivation of autoimmune process .As Ritonavir causes retinal toxicity,there is a hypothesis that use of chloroquine/hydroxychloroquine together can cause a synergic toxic effect on the retina . Ribavirin, an antiviral drug , not that popular in Covid but was known to cause ophthalmologic complications like retinopathy, retinal vein occlusion, and retinal detachment .(74,75)

Interferons (e.g., alfa, beta) are other medicines that have been linked with retinopathy, optic neuropathy ,Vogt–Koyanagi–Harada disease etc. Tocilizumab (anti-IL-6) is an immunosuppressive drug which has therapeutic effects on COVID-19 treatment but may lead to retinal haemorrhages and cotton wool spots .(76,77)

Prone positioning is an effective means to improve oxygenation in critical COVID-19 patients who are not showing response to optimal ventilator settings. But an extended period of prone positioning may cause orbital compartment syndrome, and this can be avoided by cushioning around the eyes and by keeping the patient's head above the heart level .

The need of telemedicine has been understood during the COVID-19 era. Ophthalmology was a branch pioneer in introducing technology in this field. Virtual clinics and online video consultation proved that new telemedicine tools are effective means to deliver ophthalmic care

with a high acceptance rate (86.1%) .(78) Also , artificial intelligence (AI) is being used to detect and screen retinal diseases such as diabetic retinopathy, AMD, retinopathy of prematurity ,macular oedema. The digital self-monitoring devices (like iCare HOME and implantable IOP-sensors which are used for measurement of intraocular pressure , ForeseeHome™ used for hyperacuity perimetry) and applications in smartphone (Alleye™ that does hyperacuity testing, MyVisionTrack™ for shape discrimination hyperacuity) are being used for domestic purpose for ophthalmic diseases like AMD .(79,80) Mechanized slit-lamps which have live audio/video and stereo-viewing capabilities , also the diagnostic images with smartphone cameras , these all technologies are proven the novel strategies that help in the examination of the anterior segment of the eye .

The limitations are there in the use of the newly advanced approaches in telemedicine, and this has unfamiliarity with the devices, their structure and also applications for the patient and doctor , there are concerns related to accuracy and reliability, cost, technical issues such as Internet interruption, with some privacy and policy issues. Such issues need to be solved in advance of extensive application .(81,82)

Despite the imminent economic benefits, generic drugs still are used less. There are rare studies showing the importance of sociodemographic factors on brand-name prescriptions over the generic, at the quantitative level.(83) If a quantitative examination of these relationships is done it will give information about the interventions that aim to increase the use of generic drugs over brand-name drugs. As more and more medication are prescribed , the preferential rise in use of generic medicines will be seen with a purpose to result a reduction in pharmaceutical health care expenditure.(84)In addition to this, generic drug utilisation will improve patient's medication adherence by decreasing the price barrier to access and more adherence results in additional cost-benefits with reduced hospitalization rates.

To combat Anti Microbial Resistance , there was adopted a global action plan by the World Health Organization (WHO) in 2015. Objectives of this action plan were increasing awareness and understanding of AMR (Antimicrobial Resistance), to increase knowledge by surveillance and research, and to optimise the antibiotics usage .(85)As AMR is emerging as a global health threat, the fundamental concept of AMS(Antimicrobial Surveillance) has widened , thus being applied in diverse range of contexts from hospitals, AMS programs, and the WHO global stewardship framework. (51,52)AMS programs have significantly reduced the emergence of AMR and healthcare related infections, the use of required antimicrobials, and duration of

antibiotic therapy. This also contributes to a decrease in healthcare-related costs.(54) There was a systematic review done to determine the effect of AMS programs which comprised 77 studies reported a reduced use of antibiotics , and costs in 90% and 100% studies respectively. (56,57,58)

If the wide implementation of surveillance activities and training of health professionals is done ,the resistance to antibiotics will be reduced .Ophthalmologists need to follow the antibiotic prescription guidelines.The dose and duration have to be optimum .(61,62) The antibiotics concentration has to be more than or equal to the (MIC) minimum inhibitory concentration.Combination therapy is an option to give empirical treatment to enhance therapeutic efficacy or to broaden the spectrum of activity. The irrational use of antibiotics like overuse, undefined duration of therapy, polypharmacy, frequency of administration or dosage form must not be done.(63,64)

Phase IV studies, or post-marketing surveillance of antibiotic is the major mechanism to estimate real-world usage drugs patterns, its overuse and its abuse. Such studies should be done repeatedly to analyse and make prescription guidelines so that homogeneity of prescriptions in the country is ensured.(65.66)

The National Action Plan for Anti-Microbial Resistance (NAP-AMR) was formulated by the Indian Ministry of Health and Family welfare, in April 2017.(86) The strategic guidelines of NAP-AMR are to a) strengthen knowledge and understanding of AMR by effective communication, training and education ; b) enhance awareness and evidence in AMR through surveillance; c) to decrease the incidence of infection by infection prevention and control; d) to optimize the use of antimicrobial agents everywhere ,e) to increase investments for AMR activities, innovations and research ; and f) to strengthen India's leadership on AMR by promoting collaborations at the national, international and sub-national levels. Widespread use of antimicrobials has led to AMR in ocular pathogens, AMS strategies in Ophthalmology have not been implemented at the national or global level(86,87). The literature available is sparse that highlights this upcoming issue in Ophthalmology. The measures from the NAP-AMR program need to be included in Ophthalmology practice. By restricting indiscriminate use of antibiotics and choosing wisely can reduce AMR. Furthermore, the necessity is to implement largescale microbiological surveillance and antibiotic susceptibility studies in the country.

The existing prescribing practice has to be improved considerably, especially use of generic names, has to be encouraged and a hospital formulary should be developed for this purpose. The number of medicines which are to be written in prescription should be judged rationally

and polypharmacy needs to be discouraged. Antimicrobial use needs to be rationalized because over use of antibiotics causes issues like medicine resistance and poor compliance.(97,98)

World over, appropriate use and cost of medicines are important issue in health care systems. The latest advances in medical technology always attract more debates over the usage and prescribing pattern of medications. The World Health Organization (WHO) conference held in 1985, had the theme of rational use of medicines, and also the appropriateness of pharmacotherapy which has been the subject of many investigations amongst individual facilities and across different countries.(88)

The conference defined that: "Rational use of drugs(RDU) means that patients must receive medications appropriate to their clinical needs, and must be in doses which meet their individual requirements for a sufficient time period , and the cost should be lowest to them and their community."This is many times known as the five rights – the right drug in the right doses by the right route of administration and at the right time for the right disease or patient. All these criteria will be satisfied if the prescribing pattern covers these steps: (a) To correctly define patient's problems (diagnosis); (b) To define effective and safe therapies (drug and non-drug treatments); (c) To select the appropriate drugs, in appropriate dosage and for right duration; (d) To write a clear prescription; (e) To give patients adequate information and their counselling when needed ; and lastly (f) To plan and evaluate treatment responses. But, in the reality, prescribing practices are not according to the above mentioned well defined norms and what we find infact is the inappropriate, irrational prescribing. The examples of irrational prescriptions which we see in day-to-day practice are like the use of drugs when no drug therapy is actually indicated, e.g., antibiotics given commonly for viral upper respiratory infections; inappropriate drug for a specific condition which requires drug therapy, e.g. an antibiotic in viral diarrhoeas in children who require primarily ORS; drugs with doubtful efficacy, e.g. antimotility agents when given in acute infective diarrhoea; drugs are correct but administration is incorrect, dosages, or duration, e.g., IV metronidazole used when an oral formulation would have been sufficient ; unnecessarily given expensive drugs, e.g. a third generation, broad spectrum antimicrobial where a first-line, narrow spectrum, agent would be effective and sufficient ; and multivitamin supplements and many more.(88)

The irrational prescribing is a global issue. Many developing countries have the quality of health services at peripheral health centres very unsatisfactory. Patients visit the referral hospitals even for minor problems though they could be easily treated at a primary health centres (PHC). At PHC 80% of the proportion of expenditure is spent on medicines. As the

overall health budget for medicines is limited , it is important that medicines are prescribed rationally. Various studies on prescribing patterns in India have concluded that majority of it is irrational, dosage forms (85.62%), mainly as tablets (70.82%), and liquid formulations (14.12%). Oral route (96.17%) has been the most preferred mode of administration, followed by then topical (2.11%) and parenteral (1.60%) routes. The therapy given in combination (94.33%) was more common than monotherapy (5.66%).(94) The biggest tendency for prescribing medicines by brand names (99%) was seen in the physicians. The most commonly prescribed class of medicines were antimicrobials > analgesics > cardiovascular > gastrointestinal agents. The most commonly prescribed individual medicines in various therapeutic classes included isoniazid (antimicrobial), metformin (hypoglycemic), rabeprazole (GI medicine), amlodipine (cardiovascular), atorvastatin (hypolipidemic), cetirizine (antiallergic), alprazolam (sedative-hypnotic), paracetamol (analgesic) dextromethorphan (respiratory medicine).

The irrational drug use has its impact predictable. When the quality of drug therapy is compromised it leads to higher morbidity and mortality, and resources are wasted more which in turn leads to reduced availability of other essential drugs, the costs are increased, the risk of unwanted effects is increased and there is emergence of antimicrobial drug resistance. In a study done in a single district in India, 69.2 percent of the money was spent on drugs in the private sector and 55.4 percent was spent in the public sector . Rs. 14.76 crore got wasted on the irrational prescriptions in this district in a single year – 67.58 percent of the district's total drug consumption. An adverse psychosocial impact is prevalent because of the thought process that every symptom requires a medication and this strengthens the practice of irrational prescribing.(88)

Both at the national as well as international level , initiatives are being incorporated into health care systems to promote rational drug use. The WHO gives training resources for Drugs and Therapeutics Committees from its website in a downloadable format, in addition to plenty of information regarding essential drugs, information about workshops Standard Treatment Guidelines (STGs), conferences and antimicrobial resistance and many more . For example , WHO publications 'The Guide to good prescribing' can be easily downloaded.(88,91)

Other than the WHO, International Network for the Rational Use of Drugs (INRUD) is an organization which is dedicated to the purpose of promoting rational drug use across the globe. In India, societies for example Delhi Society for the Promotion of Rational Use of Drugs

(DSPRUD) and the Rajasthan Society for the Promotion of Rational Use of Drugs are active to spread the message of rational prescribing. Many states namely Chhattisgarh, Karnataka,Tamil Nadu and Orissa have formalized Standard Treatment Guidelines (STGs) in order to implement in their respective states and they have also developed their own essential drug lists. Such initiatives, like others, are pointers to the fact that awareness of importance of rational drug use in healthcare practice is being strengthened.(89,90)

The first important step in the direction of institutionalising the culture of rational drug use is sensitisation of the prescribing physician. This concept, its vitality requires to be emphasised on all training opportunities – for the undergraduate, the postgraduate resident, an intern, nursing staff, and the medical officer undergoing in-service courses etc. The literature which young doctors should be knowing, such as the STGs mentioned above and the WHO website on medicines (http://www.who.int/medicines), they should be made compulsory for all professionals. The concepts such as Essential Medicines , pharmaco-vigilance, pharmaco-economics, P-drugs (evidence-based drug selection as per the efficacy, safety, suitability and cost), antibiotic policy, etc. need to be stressed at professional gatherings and in the course of routine teaching and learning activities.(88)

The proper implementation of procedures and guidelines is an area that needs continuous attention.The hospital administrators are aware of the need for a 'Drugs and Therapeutics Committee' in their hospitals. But, unfortunately, in many hospitals, these committees are not as active as they are required to be. It is the need of the hour for such committees to actively implement their various actions which include guiding and monitoring use of drugs in the hospital in all departments by way of serially conducting prescription audits, monitoring drug dispensing practices, adverse drug reactions and formulating antibiotic policy. The active participation of the clinician as well as the laboratory is required essentially. The concept of role-modelling can do wonders. The ideal prescribing behaviour by 'seniors' at all levels like the senior intern , the senior resident, the senior medical officer and the senior specialist,will definitely make a large impact on the prescribing behaviour of their juniors and doctor community ,as a whole. In the current times of pandemic and multiple challenges to health system , it is the utmost necessity that prescribing practices should be justifiable, evidence-based and based on sound clinical and pharmacological principles.(88,91)

AIMS AND OBJECTIVES

AIM –

To study and describe the pattern of drug prescriptions and drug use in outpatients attending Ophthalmology department during Covid pandemic in a tertiary care teaching hospital in Delhi NCR.

OBJECTIVES –

1. To evaluate the pattern of drug prescriptions in patients attending Ophthalmology outpatient department during Covid pandemic in terms of drug class, dosage forms , dosage instructions to the patient , route of administration, frequency of administration, indications and duration of therapy.
2. To evaluate the drug prescriptions of patients coming to Ophthalmology outpatient department on the basis of following **WHO Drug Prescribing Indicators –**
    a. Average number of drugs per prescription.
    b. Percentage of drug prescriptions with an antibiotic.
    c. Percentage of drugs prescribed in injectable form.
    d. Percentage of drugs prescribed by generic name.
    e. Percentage of drugs prescribed from National Essential Drugs List / National Drug Formulary.
3. To estimate the percentage of drugs given in fixed drug combination form.
4. To do cost analysis of the drugs prescribed in Ophthalmology outpatient department.

MATERIALS AND METHODS

STUDY DESIGN

The study was an open label, prospective, cross – sectional, observational type of study .

STUDY SETTING

The study was conducted by the Department of Pharmacology , Santosh Medical College ,Ghaziabad in the outpatient department of Ophthalmology, Santosh Medical College , Ghaziabad.

STUDY SUBJECTS

All patients of all ages and all genders coming to Department of Ophthalmology (Outpatient Department) in Santosh Medical College , Ghaziabad during Covid pandemic were taken as subjects.

The drug prescriptions of all patients registering in Ophthalmology Outpatient Department for all curative complaints were recorded and analysed.

The study was started after the approval of the Institutional Ethics Committee.

Sample size for the study was found to be 597 (from the formula) which was then rounded off to 600.

Sample Size Calculation:

The sample size is determined by using the following formula:

$$N = \frac{z^2 p(1-p)}{d^2}$$

Where:

n = sample size

P = estimate of proportion of prescriptions with inappropriate prescription pattern,0.5 since there is no research finding regarding estimate of inappropriate drug prescribing pattern in Santosh Hospital

d = margin of sampling error tolerated, 0.05

Z = the standard normal value at confidence interval of 98%, z value= 2.33

The sample size was $n = \frac{(2.33)^2 (0.5)(1-0.5)}{(0.05)^2} = 543$

The sample size thus calculated was 543. To this 10% was added to account for incomplete prescriptions and prescriptions with incomplete patient details. So, the eventual figure was 543 + 54 = 597. This was rounded off to the nearest hundred to arrive at the final sample size of 600.

INCLUSION CRITERIA

1.All ages

2.All genders

3.All patients with curative complaints of eyes who were prescribed any drug.

(red eye, dry eyes, discharge from eyes ,itching , foreign body sensation, trauma, conjunctival and corneal congestion, corneal lesions, glaucoma, blepharitis, swelling, congenital disorders, refraction errors, eyelid disorders, uveitis, dacryocystitis, blepharitis, keratitis etc.)

EXCLUSION CRITERIA

1.All patients attending the departments other than Ophthalmology for the ailments not related to eyes .

2.Papers on which handwriting of prescriber is illegible to identify the medication clearly.

3.Prescription not containing medicines, only lifestyle modification advices.

4. Patients of cataract or any other ocular condition which required only surgery or some intervention and not drugs.

STUDY PERIOD –

The prescriptions of all patients coming to Ophthalmology OPD in the OPD hours of 10 a.m. to 4 p.m. in Santosh Medical College fo the period of 11 months were recorded, till the sample size requirement of 600 was fulfilled.

The prescriptions for all consecutive patients attending the OPD for the first time (first time encounter) were included in the study and audited prospectively using the prescribing indicator form designed by WHO. The form has already been validated by WHO. In the present study, each patient was referred to as a prescription and only those medications used for treating ocular disorders were considered. All drugs prescribed were noted including drug class, dosage, dosage form, frequency of administration, indications for prescription and duration of therapy.

These forms were used to analyse average number of drugs per prescription, number of encounters with antibiotics, percentage of drugs prescribed by generic name , percentage of drugs given in fixed drug combination form and whether the dosage form, frequency of administration and duration of therapy were mentioned or not. Numbers of drugs prescribed from essential drug list were also noted. Essential medicines as defined by the WHO are those drugs that satisfy the health-care needs of the majority of the population; they should therefore be available at all times in adequate amounts and in appropriate dosage forms, ats a price the community can afford. Central Drugs Standard Control Organization, the regulatory body in India, has updated the National list of essential medicines in September, 2022.

The filled in forms were then analysed for the completeness of the data and put for statistical analysis . The data was audited using the indicators of drug use recommended by the World Health Organization. Data analysis was carried out using the descriptive statistical methods including mean, frequencies and percentage. Appropriate statistical tests were applied and analysed using software version SPSS 21 .

Each prescription was studied for the assessment of above-mentioned variables, and the cost incurred per prescription was calculated by considering individual cost of each drug from the latest issue of CIMS 2022, the drug book of current medical formulations. Cost comparison of the prescribed drugs was done with the cost of other available brands in the market.

OBSERVATIONS

1. Age Distribution

Years	Number	Percentage
0-10	68	11.33
11-20	105	17.5
21-40	198	33.0
41-60	138	23
61-80	91	15.17

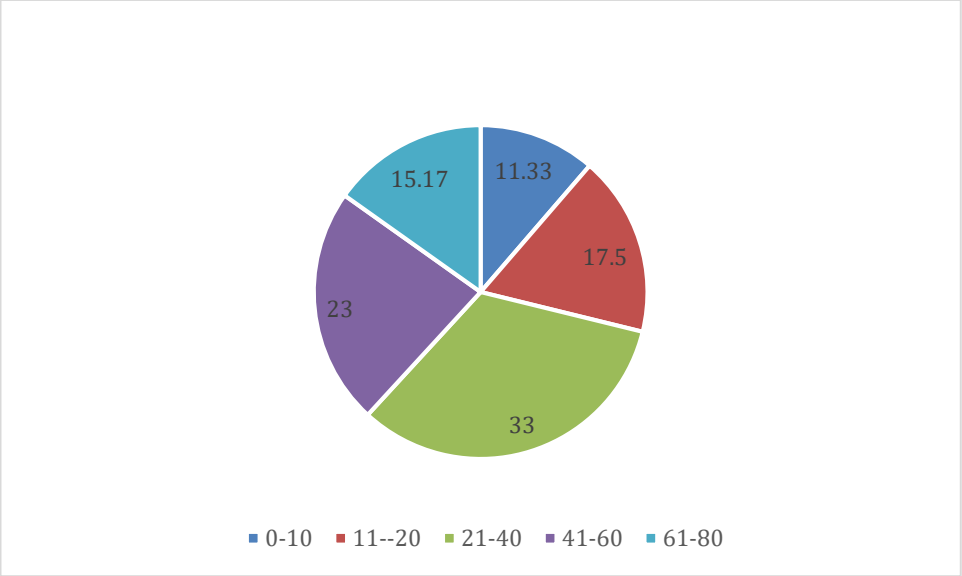

Fig. 1

In the current study, a total of 600 subjects were examined with a mean age of 33.72 years and standard deviation of 20.85. Maximum number of subjects “198” were in age group 21-40 years and minimum number of subjects “68“were in age group 0-10 years.

2. Gender Break-up

Gender	Number	Percentage
Male	347	57.83
Female	253	42.16

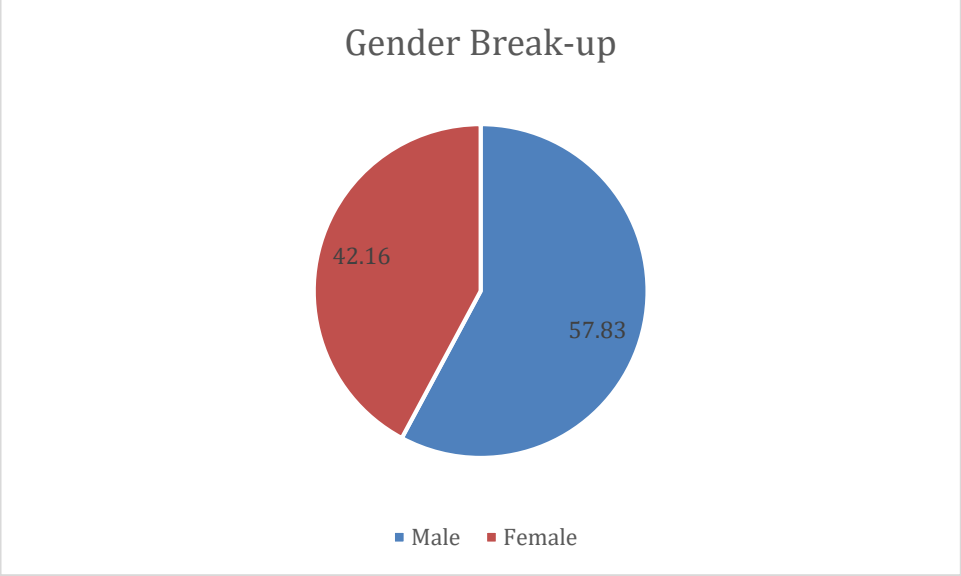

Fig. 2

Among the 600 subjects, 347 (57.83%) were male while the rest 253 (42.16%) were female.

3. Socio-economic Scale Distribution

Kuppuswamy Scale	Number	Percentage
V	181	30.17
IV	183	30.5
III	138	23
II	72	12
I	26	4.33

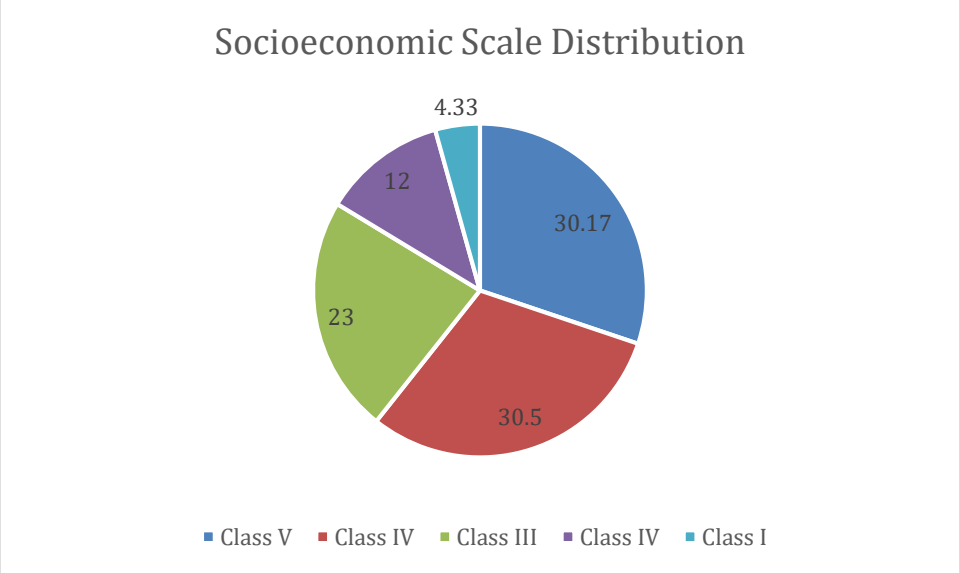

Fig. 3

The subjects were analyzed based on Kuppuswamy Socio-economic scale and it was found that the majority were in Strata IV and V, which indicated poor socio-economic condition. 183 or 30.5 % were in strata IV while 181 or 30.17% were in strata V. Least number of subjects 26 or 4.33 % were in strata I. Strata II had 72 (12%) and strata III had 138 (23%) of subjects.

4. Ophthalmic Conditions

Diagnosis	Frequency	Percentage
Conjunctivitis	183	30.5
Dry eyes	139	23.17
Refractive errors	63	10.5
Foreign Body Injury	58	9.67
Glaucoma	36	6
Keratitis	32	5.33
Eye-Lid Disorders	24	4
Uveitis	22	3.66
Sub-conjunctival bleed	18	3
Diabetic Retinopathy	11	1.83
Pterygium	8	1.34
Corneal ulcer	6	1

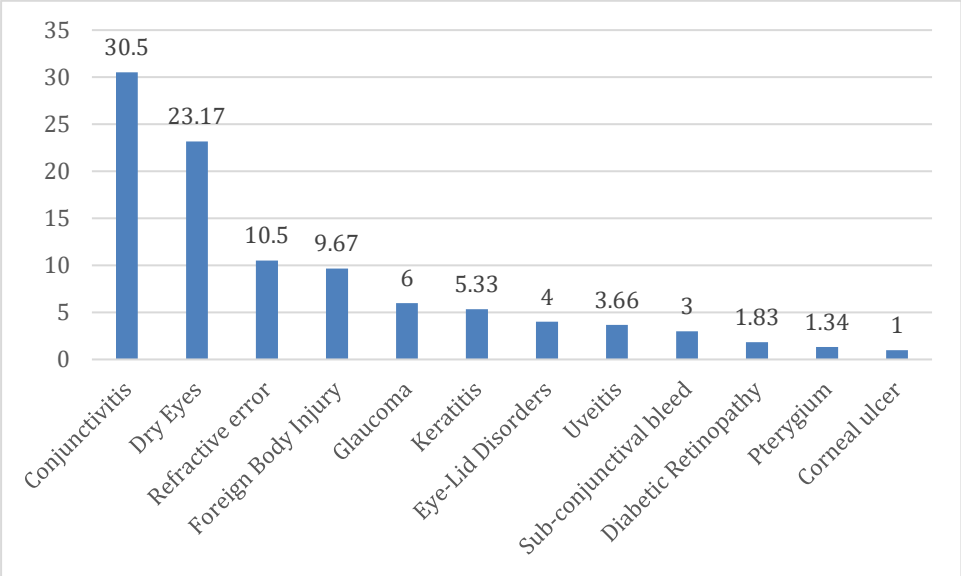

Fig. 4

In my study I found that subjects of varied diagnosis had come for consultation in the ophthalmology OPD with highest number 183 or 30.5% diagnosed as a case of conjunctivitis. The next most common diagnosis was of Dry Eyes in 139 or 23.17% of subjects. This was followed by Refractive Errors 10.5%, Foreign Body Injury 9.67%, Glaucoma 6%, Keratitis 5.33%, Eye-Lid Disorders 4%, Uveitis 3.66%, Sub-conjunctival bleed 3%, pterygium 1.34% and the least being Corneal ulcer 1%.

5. Most Prescribed Drugs

Drugs	Frequency	Percentage
Antibiotics	791	36.69
Lubricant	604	28.01
NSAIDs	238	11.03
Corticosteroid	206	9.55
Antihistaminic	119	5.51
Prostaglandin Analogues	84	3.89
Anticholinergic	53	2.45
Antiviral	34	1.57
Antacid	27	1.25
Total	2156	100

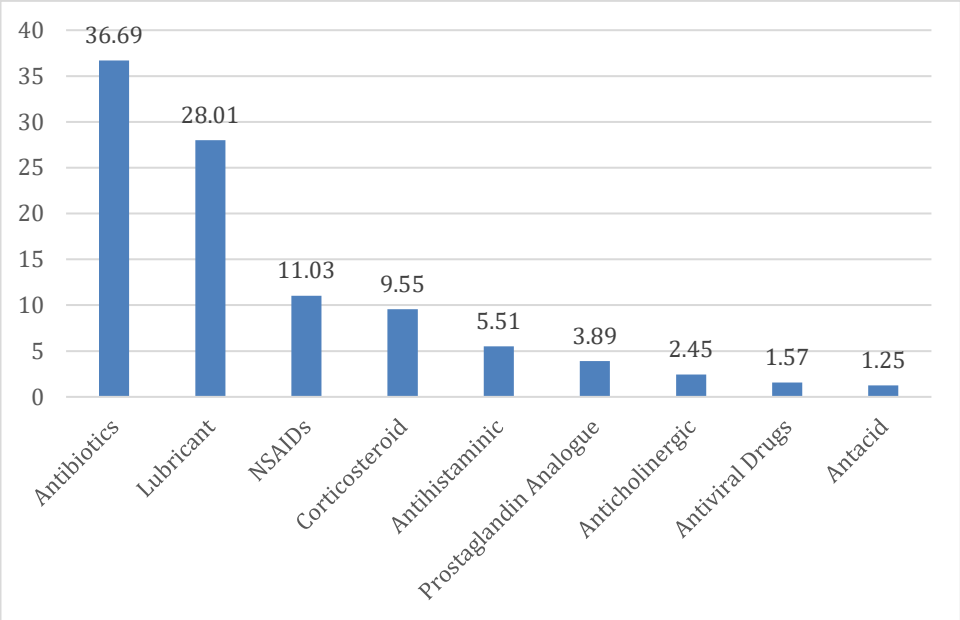

Fig. 5

Within the drugs prescribed “Antibiotics” was the most prescribed class of drugs with total number of drugs prescribed 791 or 36.69%. The next most common were Lubricants with frequency 604 or 28.01 %. This was followed by NSAIDS 11.03%, Corticosteroids 9.55%, Anti-histaminic 5.51%, Prostaglandin analogues 3.89%, Anticholinergics 2.45%, Anti-viral 1.57% and Antacids 1.25%.

6. Dosage Forms of Drugs Used

Dosage Forms	Number of Drugs Prescribed	Percentage
Drops	1477	68.51
Tablet	354	16.42
Ointment	177	8.21
Capsule	89	4.13
Syrup	54	2.5
Injection	5	0.23

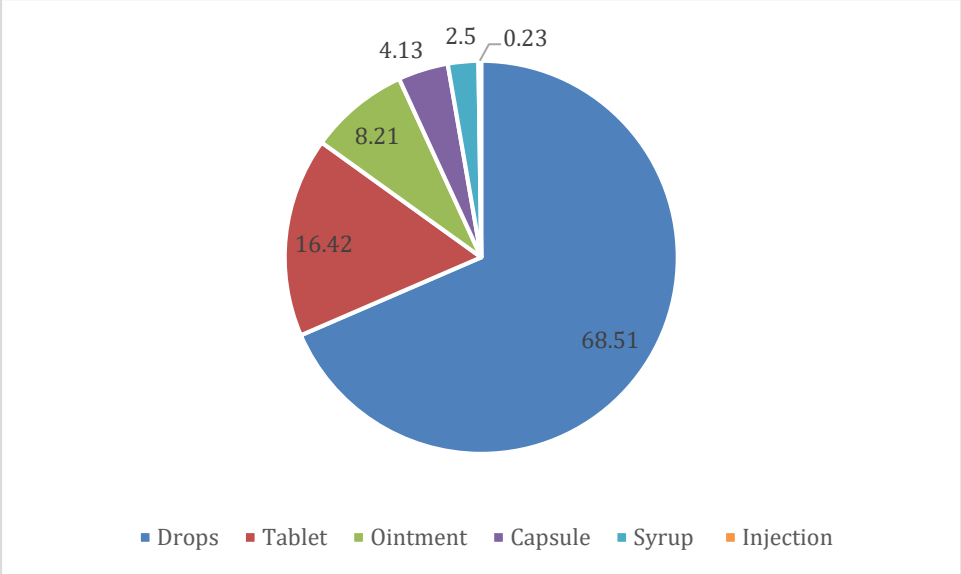

Fig. 6

In my study I found that the most common dosage form being prescribed in the Ophthalmology OPD was Eye Drops with frequency of 1477 or 68.51%, followed by tablets 354 or 16.42%. Other dosage forms prescribed were Ointment 177 or 8.21%, Capsule 89 or 4.13%, Syrup 54 or 2.5 % and least being injections 5 (0.23%).

7. Distribution of Number of drugs per prescription

Number of drugs Per Prescription	Number	Percentage
1	7	1.17
2	48	8
3	271	45.17
4	144	24
5	116	19.33
6	14	2.33

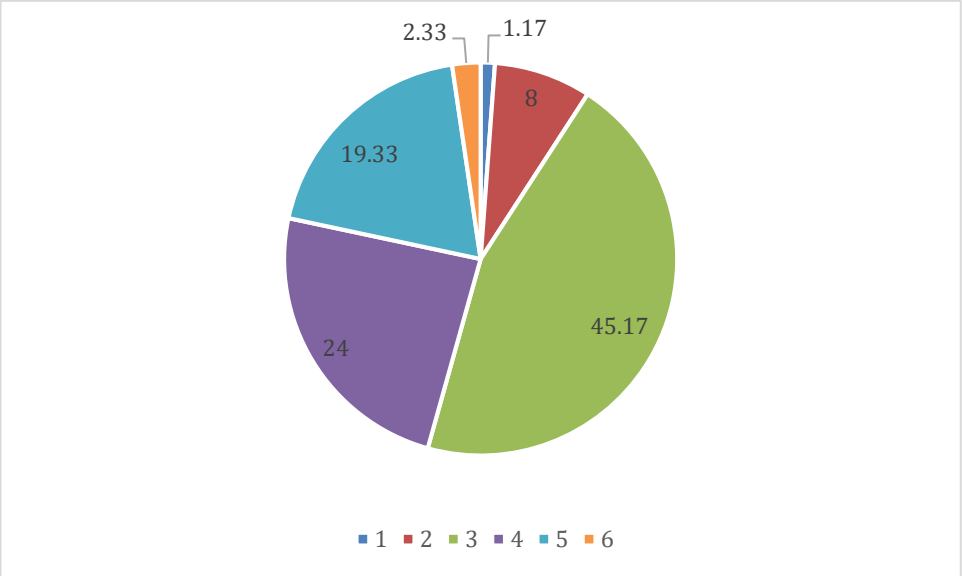

Fig. 7

While the average number of drugs per encounter in my study was 3.59, the majority of prescriptions 271 (45.17%) had just 3 drugs. This was followed by 4 drugs per prescription in 144 or 24% cases. 5 drugs per prescription were found in 116 (19.33%) cases. Next was 2 drugs per prescription in 48 (8%) and then 6 drugs per prescription in 14 (2.33 %) cases. Least was single drug prescription in 7 or 1.17% cases.

8. Prescribing Indicators as per WHO:

a. Average number of drugs per encounter (C)

   C = B/A where B is total number of different drug products prescribed, A is the no of encounters surveyed. C= 2156/600 = 3.59

   Average number of drugs per encounter was thus found to be 3.59.

b. Percentage of Drugs prescribed by Generic name (E)

   E= D/B x 100, where D is the number of drugs prescribed by generic name and B is the total number of drugs prescribed.

   E= 487/2156 = 22.58%

   Percentage of drugs prescribed by Generic name was found to be 22.58% in this study.

c. Percentage of Encounters with Antibiotics prescribed (G)

   G= F/A x 100, where F is the no of patient encounters with one or more antibiotics

   G= 238/600 x 100 = 39.66%

   Percentage of encounters with antibiotics prescribed was found to be 39.66% in current study.

d. Percentage of encounters with an injection prescribed (K)

   K=J/A x 100, where J is the total number of patients who received 1 or more injections (H), A is total number of encounters.

   K = 5/600 x 100 = 0.83%

   Percentage of encounters with an injection prescribed was found to be 0.83%.

e. Percentage of drugs prescribed from National Essential Drug List Formulary (L)
Drugs L= M/B x 100, where M is the total number of drugs from National Essential Drug List Formulary and B is the total number of different drug products prescribed.
L = 1246/2156 x 100 = 57.79%

In current study 57.79% of drugs were found to be prescribed from National Essential Drug List Formulary.

f. Percentage of Encounters with Fixed Drug Combination used (N)
N= O/A x 100, where O is number of encounters with FDC and A is the total number of encounters.
N = 322/600 x 100 = 53.67 %

In the current study 53.67 % encounters were found where Fixed Drug Combination was used.

g. Average Cost of prescription was found to be INR 1,47,822/600 = 246.37 per prescription.

In my study I found that the Mean cost of prescription was INR 246.37 with Standard Deviation of 140.007.

9.Dose Mentioned in Prescription

Prescriptions with Dose Mentioned	Number	Percentage
Yes	548	91.3
No	52	8.7
Total	600	100

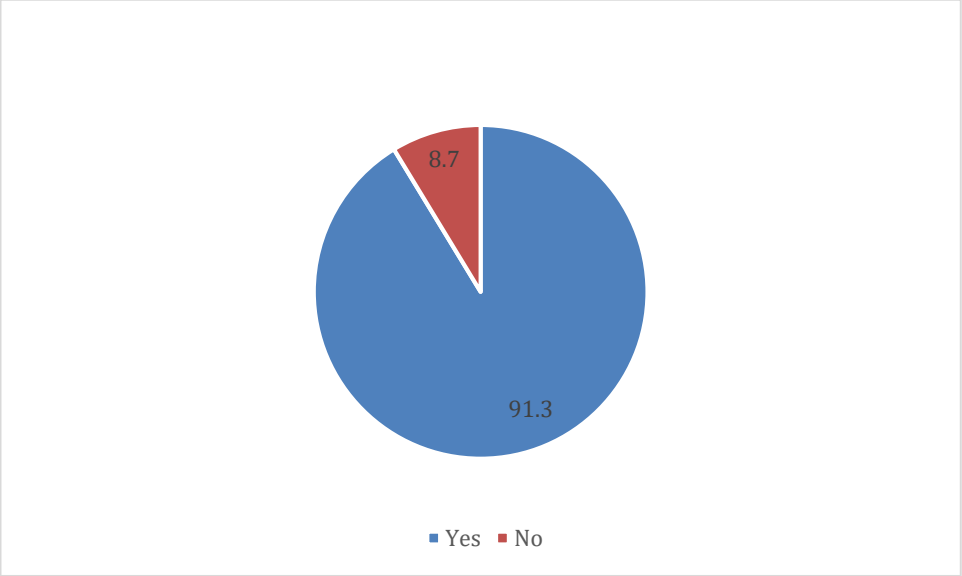

Fig. 8

91.3 percent prescriptions had doses of drugs clearly mentioned on them. Only 8.7% prescriptions had no doses mentioned

10.Duration Mentioned in Prescription

Prescriptions with Duration Mentioned	Number	Percentage
Yes	439	73.2
No	161	26.8
Total	600	100

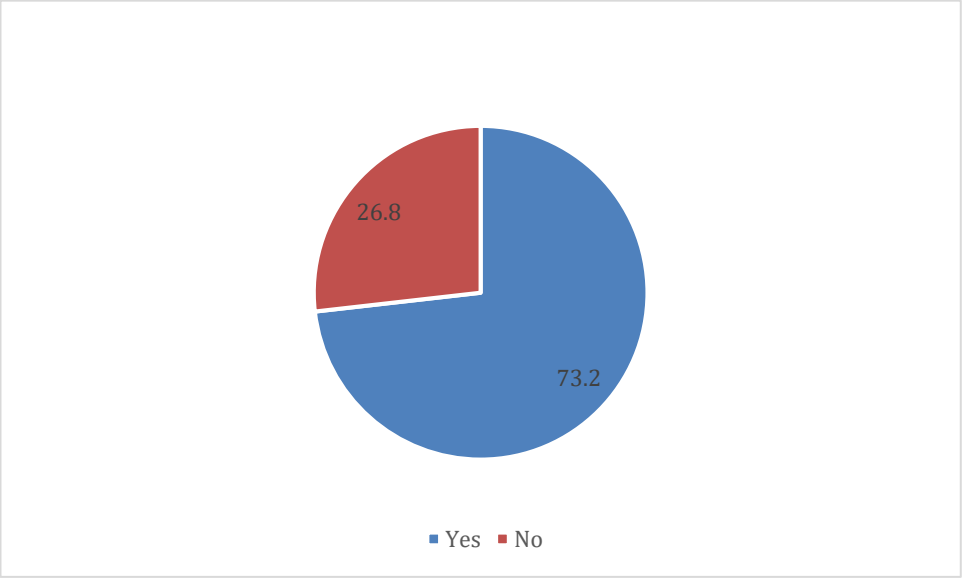

Fig. 9

Duration of drugs prescribed were mentioned in 73.2 % of total 600 prescriptions. 26.8% prescriptions had duration of therapy not mentioned.

11.Dosage Instructions Mentioned in Prescription

Prescriptions with Dosage Instructions Mentioned	Number	Percentage
Yes	422	70.3
No	178	29.7
Total	600	100

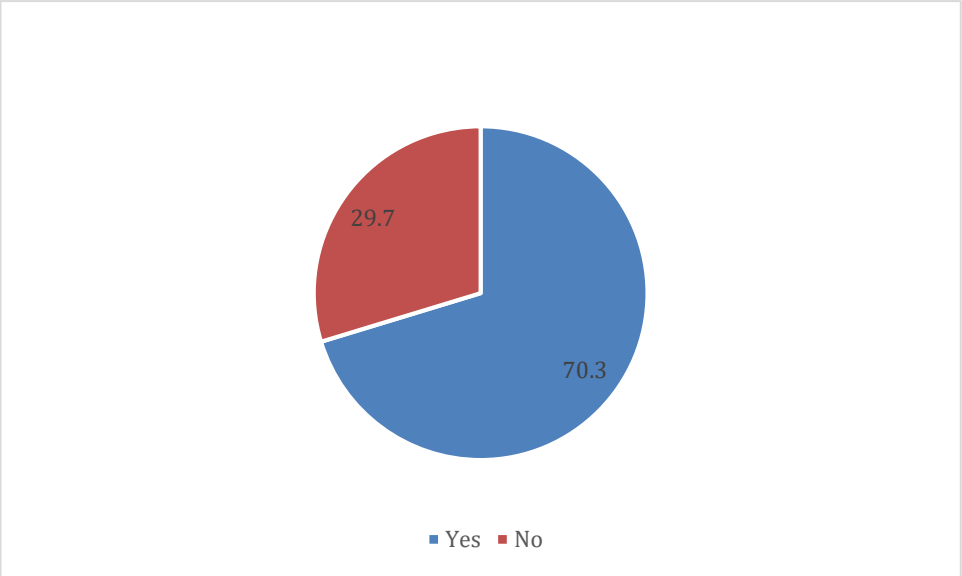

Fig. 10

70.3 prescriptions out of 600 had dosage instructions mentioned on them. Rest 29.7 % prescriptions had no dosage instructions mentioned.

12.Proportion of Covid infected Patients

Patients with Covid Infection	Number	Percentage
Yes	119	19.8
No	481	80.2
Total	600	100

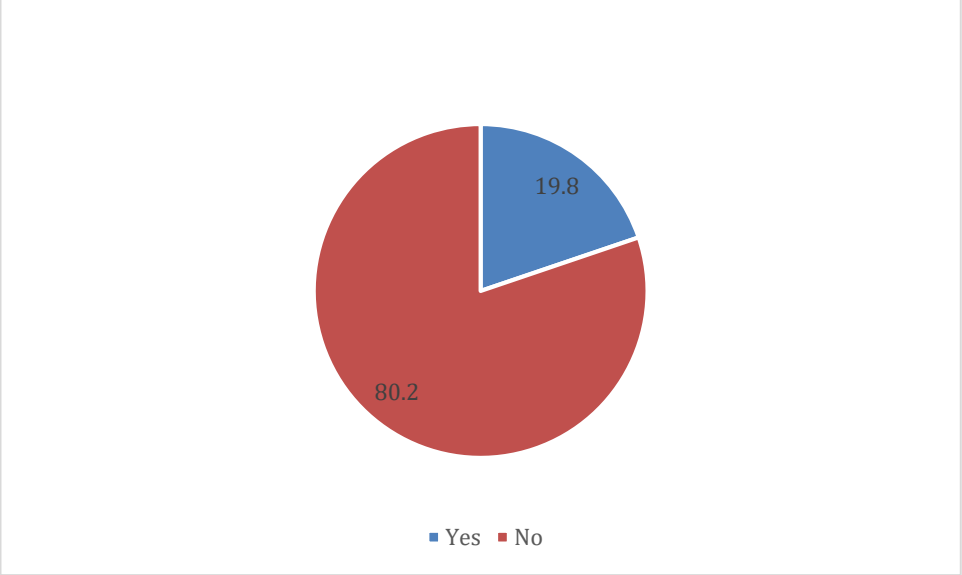

Fig. 11

19.8 % patients had their Covid RT-PCR test result positive. Covid infection status was not known for remaining 80.2% patients.

13.

Drug	Class	PDD	WHO DDD
Ciprofloxacin	Antimicrobial	1 gram	1 gram
Ibuprofen	NSAID	1.6 gram	1.2 gram
Paracetamol	NSAID	4.6 gram	3 gram
Diclofenac	NSAID	0.14 gram	0.1 gram
Ranitidine	ANTACID (H2 Blocker)	0.42 gram	0.3 gram
Pantoprazole	ANTACID (PPI)	48 milligram	40 milligram
Methylprednisolone	Corticosteroid	13.6 milligram	7.5 milligram

PDD – Prescribed Daily Dose

DDD – Defined Daily Dose (recommended by WHO)

The PDD values of all the above medicines given to patients were found to be higher than DDD values as recommended by WHO , except Ciprofloxacin , which was same.

DDD is not defined by WHO for topical drug forms , given in Ophthalmological conditions . It is defined for only oral drugs.

14. Association between Diagnosis and Age Groups

Diagnosis	0-10	11-20	21-40	41-60	61-80	Total	P-value
Conjunctivitis	20	35	104	17	7	183	0.02
Dry eyes	5	18	45	40	31	139	3.4
Refractive errors	12	18	15	13	5	63	3.7
Foreign Body Injury	18	10	8	14	8	58	4.5
Glaucoma	1	5	5	14	11	36	1.3
Keratitis	3	7	7	8	7	32	1.2
Eye-Lid Disorders	4	3	3	11	3	24	1.1
Uveitis	2	5	6	6	3	22	0.8
Sub-conjunctival bleed	3	2	0	7	6	18	0.5
Diabetic Retinopathy	0	0	0	5	6	11	0.7
Pterygium	0	0	3	2	3	8	0.76
Corneal ulcer	0	2	2	1	1	6	0.61
Total	68	105	198	138	91	600	

Chi-square Test of Association was applied between **Diagnosis and Age Groups**. The test was found to be significant only for Conjunctivitis with p-value 0.02 and highest incidence of 104 cases in 21-40 years Age Group. The test was not found to be significant for any other Diagnosis.

15. Association Between Diagnosis and Gender

Diagnosis	Male	Female	Total	P-Value
Conjunctivitis	118	65	183	0.01
Dry eyes	77	62	139	0.07
Refractive errors	37	26	63	0.5
Foreign Body Injury	32	26	58	0.8
Glaucoma	20	16	36	0.9
Keratitis	15	17	32	0.65
Eye-Lid Disorders	14	10	24	0.8
Uveitis	10	12	22	0.75
Sub-conjunctival bleed	11	7	18	0.55
Diabetic Retinopathy	4	7	11	0.4
Pterygium	5	3	8	0.7
Corneal ulcer	4	2	6	0.4
Total	347	253	600	

Chi-square Test of Association was applied between **Diagnosis and Gender**. The test was found to be significant only for Conjunctivitis and Dry Eyes with p-value 0.01 and Dry eyes 0.07 respectively, with highest incidence of Male Gender for both diagnosis. The test was not found to be significant for any other Diagnosis.

16. Association between Diagnosis and Socio-economic Strata

Diagnosis	**V**	**IV**	**III**	**II**	**I**	**Total**	**P-value**
Conjunctivitis	67	63	34	16	3	183	0.03
Dry eyes	40	36	30	27	6	139	0.04
Refractive errors	11	22	22	4	4	63	0.55
Foreign Body Injury	19	19	6	8	6	58	0.4
Glaucoma	8	11	12	4	1	36	0.3
Keratitis	8	9	12	1	2	32	0.3
Eye-Lid Disorders	8	6	5	4	1	24	0.6
Uveitis	10	3	5	3	1	22	0.45
Sub-conjunctival bleed	7	5	5	1	0	18	0.4
Diabetic Retinopathy	0	2	3	4	2	11	0.2
Pterygium	2	4	2	0	0	8	0.1
Corneal ulcer	1	3	2	0	0	6	0.1
Total	181	183	138	72	26	600	

Chi-square Test of Association was applied between **Diagnosis** and **Socio-economic Strata.** The test was found to be significant only for Conjunctivitis and Dry Eyes with p-value 0.03 and Dry eyes 0.04 respectively, with highest incidence of Strata V for both diagnosis. The test was not found to be significant for any other Diagnosis.

17. Association between Drug action class and Socio-economic Strata

Drug Action Class	**V**	**IV**	**III**	**II**	**I**	**Total**	**P-value**
Antibiotics	84	63	47	23	3	220	0.7
Lubricant	64	45	37	18	4	168	0.9
NSAIDs	13	32	10	7	4	66	1.1
Corticosteroid	10	14	20	7	6	57	1.3
Antihistaminic	3	12	11	5	2	33	1.5
Prostaglandin Analogues	3	7	6	4	3	23	0.8
Anticholinergic	3	6	2	3	1	15	0.76
Antiviral	0	2	4	3	1	10	0.66
Antacid	1	2	1	2	2	8	0.59
Total	181	183	138	72	26	600	

Chi-square Test of Association was applied between **Drug Action Class** and **Socio-economic Strata**. The test was not found to be significant for any action class.

18. Association Between Drug Action Class and Gender

Drug Action Class	**Male**	**Female**	**Total**	**P-value**
Antibiotics	124	96	220	0.8
Lubricant	97	71	168	1.3
NSAIDs	41	25	66	0.78
Corticosteroid	35	22	57	0.9
Antihistaminic	22	11	33	0.04
Prostaglandin Analogues	10	13	23	0.84
Anticholinergic	10	5	15	0.71
Antiviral	3	7	10	1.1
Antacid	5	3	8	1.3
Total	347	253	600	

Chi-square Test of Association was applied between **Drug Action Class and Gender**. The test was found to be significant only for Anti-histaminics with p-value 0.04. The test was not found to be significant for any other Drug Action Class.

19. Association Between Drug Action Class and Age Group

Action Class	**0-10**	**11-20**	**21-40**	**41-60**	**61-80**	**Total**	**P-value**
Antibiotics	32	40	75	56	17	220	0.56
Lubricant	12	20	58	30	48	168	0.83
NSAIDs	10	14	20	18	4	66	0.51
Corticosteroid	8	16	17	9	7	57	1.1
Antihistaminic	5	7	13	5	3	33	1.3
Prostaglandin Analogues	0	3	4	9	7	23	0.9
Anticholinergic	1	3	4	5	2	15	0.77
Antiviral	0	1	3	4	2	10	0.6
Antacid	0	1	4	2	1	8	0.2
Total	68	105	198	138	91	600	

Chi-square Test of Association was applied between **Drug Action Class** and **Age Groups.**
The test was not found to be significant for any Drug Action Class.

20. **Cost Comparison** of Drugs Prescribed in OPD

Drug	**Price of drug given** (per bottle/per strip) (Rs.)	**Max. price** (in market) (Rs)	**Minimum price** (in market) (Rs)	**Price of drug given/Price of cheapest drug available**
Loteprednol drop	160	320	30	5.3
Prednisolone drop	62	110	15	4.13
Carboxymethylcellulose drop	174	354	70	2.48
Hydroxypropylmethylcellulose drop	186	770	145	1.28
Tobramycin drop	77	110	12	6.41
Ciprofloxacin drop	18	85	13	1.38
Moxifloxacin drop	188	227	66	2.84
Olopat drop	220	252	154	1.42
Ketorolac drop	69	98	46	1.5
Moxifloxacin + Dexamethasone	141	274	75	1.88
Moxifloxacin + Ketorolac	169	304	80	2.11
Phenylephrine+ Naphazoline	106	156	37	2.86
Latanoprost drop	530	848	417	1.27
Tab Combiflam	46	68	24	1.91
Tab Ciprofloxacin	50	97	32	1.56
Tab Ranitidine	52	90	27	1.92
Cap.Multivitamin	107	445	54	1.98

In the current study, Costliest Drug prescribed was Latanoprost with unit cost of Rs 530 and cost variance range of Rs.417-848. Similarly Cheapest drug prescribed was Ciprofloxacin drop with unit price of Rs.18 and cost variance range of Rs.13-88.

58.8% of medicines prescribed in OPD at our centre are 1-2 times costlier than cheapest alternative formulations available in the market. 23.5 % medicines are found to be 2-3 times costlier than cheapest alternatives available. Remaining 17.6% medicines are found to be more than 4 times higher priced than the cheapest alternatives available.

RESULTS

According to table 1 of the observations it was found that out of 600 prescriptions examined, the mean age of subjects was 33.72 years with standard deviation of 20.85. Maximum number of subjects “198” were in age group 21-40 years and minimum number of subjects “68“were in age group 0-10 years. Rest 23% subjects belonged to age group 41-60 years, 17.5% subjects belonged to age group 11-20 years and 15.17% subjects belonged to 61-80 years.

According to table 2 of the observations it was found that out of 600 subjects, 347 (57.83%) were male while the rest 253 (42.16%) were female.

According to table 3 of the observations it was found that as per the Kuppuswamy scale applied for socioeconomic distribution of subjects , the majority were in Strata IV and V, which indicated poor socio-economic condition. 183 or 30.5 % were in strata IV while 181 or 30.17% were in strata V. Least number of subjects 26 or 4.33 % were in strata I. Strata II had 72 (12%) and strata III had 138 (23%) of subjects.

The table 4 of the observations showed that the highest number 183 or 30.5% subjects were diagnosed as a case of conjunctivitis. The next most common diagnosis was of Dry Eyes in 139 or 23.17% of subjects. This was followed by Refractive Errors 10.5%, Foreign Body Injury 9.67%, Glaucoma 6%, Keratitis 5.33%, Eye-Lid Disorders 4%, Uveitis 3.66%, Sub-conjunctival bleed 3%, pterygium 1.34% and the least being Corneal ulcer 1%.

Table 5 showed that within the drugs prescribed “Antibiotics” was the most prescribed class of drugs with total number of drugs prescribed 791 or 36.69%. The next most common were Lubricants with frequency 604 or 28.01 %. This was followed by NSAIDS 11.03%, Corticosteroids 9.55%, Anti-histaminic 5.51%, Prostaglandin analogues 3.89%, Anticholinergics 2.45%, Anti-viral 1.57% and Antacids 1.25%.

Table 6 showed that the most common dosage form being prescribed in the Ophthalmology OPD was Eye Drops with frequency of 1477 or 68.51%, followed by tablets 354 or 16.42%. Other dosage forms prescribed were Ointment 177 or 8.21%, Capsule 89 or 4.13%, Syrup 54 or 2.5 % and least being injections 5 (0.23%).

In table 7 it was found that the average number of drugs per encounter in my study was 3.59, the majority of prescriptions 271 (45.17%) had just 3 drugs. This was followed by 4 drugs per prescription in 144 or 24% cases. 5 drugs per prescription were found in 116 (19.33%) cases. Next was 2 drugs per prescription in 48 (8%) and then 6 drugs per prescription in 14 (2.33 %) cases. Least was single drug prescription in 7 or 1.17% cases.

Table 8 showed the results according to WHO drug prescribing indicators.

a. Average number of drugs per encounter was found to be 3.59.

b.Percentage of drugs prescribed by Generic name was found to be 22.58% in this study.

c.Percentage of encounters with antibiotics prescribed was found to be 39.66% in current study.

d. Percentage of encounters with an injection prescribed was found to be 0.83%.

e. In current study 57.79% of drugs were found to be prescribed from National Essential Drug List Formulary.

f. In the current study 53.67 % encounters were found where Fixed Drug Combination was used.

g. The mean cost of prescription was INR 246.37 with Standard Deviation of 140.007.

Table 9 showed that in the study 91.3 percent prescriptions had doses of drugs clearly mentioned on them. Only 8.7% prescriptions had no doses mentioned.

Table 10 showed that duration of drugs prescribed were mentioned in 73.2 % of total 600 prescriptions. 26.8% prescriptions had duration of therapy not mentioned .

In table 11 it was found that 70.3 prescriptions out of 600 had dosage instructions mentioned on them. Rest 29.7 % prescriptions had no dosage instructions mentioned.

In table 12 it was found that 19.8 % patients had their Covid RT-PCR test result positive. Covid infection status was not known for remaining 80.2% patients.

Table 13 revealed that the PDD (prescribed daily dose) values of all the medicines given to patients were found to be higher than DDD(defined daily dose) values as recommended by WHO , except Ciprofloxacin , which was same.(1gram)

Table 14 revealed that the chi square association of Conjunctivitis as diagnosis is significant with the age group 21-40 years where it is found in maximum numbers.

Table 15 showed that the chi square association of Conjunctivitis and Dry eyes as diagnosis is significant with the male gender and thus majority of these cases are seen in males, as compared to females.

Table 16 revealed that the chi square association of Conjunctivitis and Dry eyes as diagnosis is significant with the lowest socioeconomic strata (strata 5of Kuppuswamy Scale). Thus majority subjects of these diseases belonged to the poor socioeconomic class.

In table 17 Chi-square Test of Association was applied between Drug Action Class and Socio-economic Strata. The test was not found to be significant for any action class.

In table 18 Chi-square Test of Association was applied between Drug Action Class and Gender. The test was found to be significant only for Anti-histaminics with p-value 0.04. The test was not found to be significant for any other Drug Action Class.

Table 19 shows that Chi-square Test of Association was applied between Drug Action Class and Age Groups. The test was not found to be significant for any Drug Action Class.

Table 20 showed that the costliest drug prescribed was Latanoprost with unit cost of Rs 530 and cost variance range of Rs.417-848. Similarly cheapest drug prescribed was Ciprofloxacin drop with unit price of Rs.18 and cost variance range of Rs.13-88

58.8% of medicines prescribed in OPD at our centre are 1-2 times costlier than cheapest alternative formulations available in the market. 23.5 % medicines are found to be 2-3 times costlier than cheapest alternatives available. Remaining 17.6% medicines are found to be more than 4 times higher priced than the cheapest alternatives available.

DISCUSSION

Drugs play a key role in the health care system as they improve human health and promote wellbeing. However, the optimum and rational use of drugs is the most essential thing to ensure the good health of individuals and society. Drug Utilisation studies are a very helpful tool to assess, evaluate and determine the current drug prescribing practices in our health system and to know whether they are fulfilling the standard rational criteria of drug prescription (WHO/INRUD) or not, and to what extent.(1,3) There is a constant need to do drug utilisation studies at all levels of health care in order to conduct a periodic review of prescribing practices and thereafter to do the necessary educational interventions.(8)

The present study was an attempt to explain the current trend of drug prescribing pattern and drug utilisation in Ophthalmology Outpatient Department in Santosh Medical College, Ghaziabad, a tertiary care center, with an intention to promote proper use of drugs among prescribers.

A total of 600 prescriptions were reviewed from the outpatients of Ophthalmology department. Data analysis of gender distribution amongst study subjects showed a male predominance. There were 347 (57.83%) prescriptions of males and 253 (42.16%) prescriptions of females. This result was similar to study done by Banerjee I et al(8) who too found that prescriptions for males outnumbered those of females with male prescriptions being 67.3% while those of females being 32.6% and also studies done by Slathia et al and Dhami et al who found that men were more prone to ocular diseases. This was in contrast to findings by Sarfaraz Mohammed et al who found that female prescriptions were 54% which outnumbered the male prescriptions 46% and also studies done by Rawah MA et al and Prathap SA et al who found female preponderance in ocular diseases.

The average number of drugs per prescription is an important indicator to measure the degree of polypharmacy. WHO had recommended the average number of drugs per prescription to be 1.6 to 1.8, i.e., should be less than or equal to 2. As the number of drugs in a prescription increases, it increases the risk of drug interactions, adverse effects, non-compliance and the cost of treatment. In our study, we found the average number of drugs per prescription to be 3.59. This observation is similar to Hardik V Vanya et al (3) who found 3.2 drugs per prescription and this was in contrast to study done by Pradeep R. Jadhav et al(1) who found just 1.49 drugs per prescription in their study. There were 271 prescriptions with 3 drugs on

them (45.17%) ,48 prescriptions with 2 drugs (8%) and 7 prescriptions with just 1 drug (1.17%) , and on the other hand 14 prescriptions had 6 drugs mentioned on them(2.33%).

Age of the subjects was also recorded. Mean age of patients was found to be 33.72 years with Standard Deviation of 20.85. In study done by Jain et al (27) it had mean age of patients at 36.7 years with standard deviation of 13.9 years, Banerjee et al(8) had mean age of 48.3 years with standard deviation of 8.9 years. Maximum number of the patients were found in the age group 21-40 years i.e.198 i.e. (33%) followed by 41-60 years i.e.138 (23%), and then in age group 11-20 years(17.5%) ,followed by age group above 60 years(15.17%) and least number of patients were found in the group below 10 years (11.33%). Sarfaraz et al(2) had maximum number of patients in 46-60 years age group , followed by those above 60 years. Our findings were also similar to the findings of Amit Kr. Jain et al(27) and Pradeep Kr. Jadhav et al.(1)

In our study we also found that majority patients belonged to the poor and lower middle socioeconomic class, which correlates with the fact that our institution primarily deals with the healthcare of the poor and marginalized segment of the population. Majority of the patients belonged to strata 4 and strata 5 of Kuppuswamy scale i.e. the poor socioeconomic class. (30.5% cases in strata 4 and 30.17% cases in strata 5). (106)This further emphasizes the fact that cost effectiveness is a major factor to be considered while prescribing medicines to this class of patients. Therefore the need of generic drug prescription arises and promotion of pharmaceutical companies and their products should be discouraged by the practitioners. More and more medicines need to prescribed from essential drugs list.

A review of all prescriptions revealed that various dosage forms were prescribed for the patients. Out of 600 prescriptions containing 2156 drugs, majority were in the form of eye drops 1477 (68.51%) , followed by tablets 354 (16.42%) , and eye ointments were 177 (8.21%) . Small percentage of medicines were given in syrup form especially in the paediatric population and only 0.23% medicines were given in injectable form. These findings were similar to study of Banerjee et al (8) who found that majority dosage form was eye drops at 70.8%, tablets at 15.9%, ointment 6.1% and Hardik V. Vanya(3) et al who found eye drops being prescribed at 66.8%.This shows that majority of drugs used in Ophthalmology department is for topical use (drop or ointment), and oral drugs are reserved for those patients with systemic symptoms , and injectables are very rarely used for special situations or in severe diseases.

This emphasizes the fact that topical medicine in the form of eye drop or ointments are better as they have site specific action, are effective, have less adverse effects because of less systemic absorption as compared to oral formulations.

In our study the most commonly encountered diseases were highest number 183 or 30.5% diagnosed as a case of Conjunctivitis. The next most common diagnosis was of dry eyes disease in 139 or 23.17% of subjects. This was followed by Refractive errors 63 i.e.10.5%, Foreign Body Injury 9.67%, Glaucoma 6%, Keratitis 5.33%, Eye-Lid Disorders 4%, Uveitis 3.66%, Sub-conjunctival bleed 3%, Diabetic Retinopathy 1.83% , pterygium 1.34 and the least being Corneal ulcer 1%. This was similar to findings by Jadhav et al(1) who found Conjunctivitis at 54% and Dry eyes 31%. And also similar to findings in study done by Amit Kr. Jain et al(27) .This was in contrast to study by Hardik V Vanya et al(3) who found majority disease as Eye lid disease at 34% and Conjunctivitis at 20.3%.And also in contrast to the findings by Shakya Shreshtha et al(12) . These findings show that inflammatory conditions were the main diseases from which patients suffered . The inflammation affected various structures of eyes and was of varying degree(16,17,20). Most patients suffered from acute inflammation and some had chronic inflammatory disorders.Covid 19 infection also seems to contribute to the inflammation in eye by various mechanisms.(9,10,11) Next cases of dry eyes and refractive errors showed the effect of lifestyle changes that have come into existence since the onset of Covid pandemic.(31) Excess use of digital screens , by children and adults, along with restricted outdoor activity and unhealthy diet have contributed to many of such ocular ailments.(28.29,30).The inappropriate use of face masks is a major factor in causing dry eyes , especially in healthcare workers.(28)Sanitiser induced injury, alcohol injury , chemical injury have been seen in patients , usually children, and healthcare workers .During the lockdown period , kids and adults remained indoor maximum time which also predisposed them more to household injuries .(9,10) Ocular allergies have also been reported in Ophthalmology OPD because of excessive use of chemicals and sanitisers and disinfectants. (32)

Out of total 2156 drugs prescribed in 600 prescriptions the most frequently prescribed drug was antibiotics i.e.791 (36.69%), followed by lubricants i.e.604 (28.01%), followed by NSAIDS 238(11.03)%, then corticosteroids 206 (9.55%), then anti-histaminic 119(5.51%), ,followed by Prostaglandin analogues 84(3.89%), then anticholinergics 53(2.45%), then antivirals (Ribavirin and Acyclovir) in 34 (1.57%) and finally antacids in 1.25% patients. This was similar to findings by Sarfaraz et al (2) who found antibiotics at 49.6%, Lubricants 16.34%, NSAIDS 9.29%, Anti-histaminic 5.39%, corticosteroids at 4.34% and Jain et al (27) who found

antibiotics at 42.29% and lubricants at 26.8%. This was in contrast to study done by Pradeep R. Jadhav et al(1) who found a high use of anti-allergic drugs at 18.37% next only to antibiotics 43.11%. Also, these were in contrast to findings by Janaki Devi et al.(33) These results showed that antibiotics and anti-inflammatory drugs are the major class of drugs prescribed to patients in Ophthalmology. Also, lubricants (Carboxymethylcellulose and Hydroxymethylcellulose) are widely used in majority of OPD patients. Since, the infective and inflammatory cases are most common presentations seen in Ophthalmology , these drugs are in use to a great extent. The drugs are given both for local action and systemic , as well. They are prescribed both for shorter duration and also longer periods . Anti allergics including antihistaminics and corticosteroids are the next commonly used drugs. These are given more in drop form than oral . Both combination forms and single preparations are used.

The most common antibiotic prescribed was Moxifloxacin (fluoroquinolone), followed by Ciprofloxacin (fluoroquinolone), followed by Tobramycin(aminoglycoside). The most common NSAIDs given were Paracetamol ,Ibuprofen, Ketorolac , Naproxen . They are given either singly or in combination form .Topical preparations are given more commonly than oral preparations. Amongst Steroidal drugs , most commonly prescribed steroid is Dexamethasone , Loteprednol, and Fluorometholone. They are mostly given in drop form , but in some patients with severe , systemic symptoms, oral preparations are also given.

Percentage of encounters with antibiotics prescribed was found to be 39.66 % in current study. This was in contrast to Sarfaraz et al (2) who found antibiotics being prescribed in 86% of encounters, Hardik V Vanya et al (3) 62.2 %. This was similar to Pradeep R. Jadhav et al(1) who found antibiotics in 44.83% of encounters and Banerjee et al(8) who found 36.4% of antibiotics per encounter. This was in contrast to Maniyar et al(34) who found lower antibiotic usage at 30.1% of encounters. As per WHO guidelines(35) for rational drug therapy the antibiotics should occupy 20% -26.8% of all medicines prescribed in a setting and injectables should occupy 13.4% – 24.1%.As the irrational and overuse of antibiotics will lead to emergence of antibiotic resistance , this recommendation should be strongly followed. Antibiotic resistance is a threat to the healthcare of the society and country.(36)

Amongst lubricants Carboxymethylcellulose is the most frequently prescribed drug because it helps in treating dry eyes by increasing tear production and protects the ocular surface from desiccation, allows prolonged retention time of tears and keep the eyes moist.

During Covid pandemic the cases of dry eyes and refraction errors have risen in all age groups because of the increase in screen time.(29,31) In our study also we found cases of Refractive

errors to be 63 (10.5%), and cases of Dry eyes to be 139 (23.17%) next to cases of Conjunctivitis which were maximum i.e.183 (30.5%).

As a result, the use of lubricant eye drops and ointments has increased significantly. Also, post covid patients are commonly suffering from immune hyperreactivity syndrome because of which cases of allergic conjunctivitis and uveitis have also increased significantly.(32,16, 18) This, in turn has led to an increase in the use of corticosteroids (topical) in patients for various inflammatory conditions of eyes. In our study, Corticosteroid were prescribed quite frequently at 9.55%. Antihistaminics (olopatadine, cetirizine, fexofenadine) were next frequent drugs used for allergic conditions.

Antibiotics are still the most commonly prescribed medicines in all infective conditions as well as all the inflammatory conditions. Antibiotics were a part of 36.69% of all the drugs prescribed in our study. They are sometimes prescribed therapeutically to cure the infective conditions and sometimes prophylactically to prevent secondary infections in trauma, surgeries, and inflammatory conditions. Amongst the antimicrobials, the most commonly prescribed class is of Fluoroquinolones, out of which Moxifloxacin is the most frequently used, followed by Ciprofloxacin. Next class prescribed most frequently is Aminoglycosides, of which Tobramycin is given the most. Antibiotics were either prescribed singly as drops or tablets, or were a part of fixed drug combinations with glucocorticoids and NSAIDS.

In our study we found FDC (Fixed Dose Combinations) drugs to constitute 53.67% of all encounters. This suggests the increasing use of FDCs in modern ophthalmic practice. The most common prescribed FDC was Moxifloxacin + Dexamethasone eye drops , and Ibuprofen + Paracetamol+ Serratiopeptidase amongst oral medicines. This was in contrast to Hardik V. Vanya et al(3) study which found FDC usage at 12.46% and Sarfaraz et al(2) at 74.2%. WHO recommends minimum use of combination medicines , as it leads to polypharmacy increasing the number of different class of drugs used together.(35) This increases the risk of drug interactions, chances of inappropriate dosing and adverse effects . Also increases the cost of prescription.

The percentage of drugs prescribed in generic form, in our study was found to be 22.58%. This was in stark contrast to Jain et al(27) who found generics being prescribed at measly 1.19% and Pradeep R. Jadhav(1) et al who found generics at 2.35%. Hardik V. Vanya(3) et al found generic usage at 42.6%.

WHO has recommended the 100% generic drug prescribing to ensure the cost effectiveness of the treatment all over, especially in developing countries, where the major bulk of the

population is economically compromised.(35) Also, prescribing drugs by generic name makes the treatment apart from low cost, rational as it avoids prescription writing errors and confusion of dispensing of different brand names which sound alike and spell similar.

The percentage of drugs from National Essential Drugs List is found to be 57.79%. This was in contrast to Hardik V. Vanya et al(3) study which found essential drug list compliance at 24% and Pradeep R Jadhav et al(1) at 19.48% and similar to Sarfaraz et al(2) study at 50.9%.(103)

According to WHO rational drug recommendations, there should be 100% use of drugs from Essential Drugs List , as this ensures that necessary medicines are available to the masses , unaffording population at an easily affordable price .(35) So that, everyone gets a cost-effective treatment. This is especially an important consideration for a developing country like India.

91.3% prescriptions of 600 were found to have doses of all drugs prescribed on them. 73.2 % prescriptions had duration of therapy mentioned on them. 70.3% prescriptions had dosage instructions mentioned on them . These observations revealed that majority of prescriptions had details of dosing mentioned properly. A small proportion of prescriptions were incomplete. According to WHO and CDSCO guidelines , all drug prescriptions should be complete in terms of patient details, complaints, drug dosing, dose forms, dose instructions, and duration of treatment.(35,36)

Covid infection status of 19.8% patients was positive . This was on the basis of RT -PCR result. The status of remaining 80.2 % was not known. On the basis of observations of all symptoms, and diagnosis of patients in our study there seemed to be a possible association of Covid infection with varied presentations in Ophthalmology.

The chi square test of association was applied to see the association of various ophthalmological conditions coming to OPD at our centre to the age group, gender and socioeconomic scale. It was found that the association of Conjunctivitis was statistically significant to the age group , being most common in 21-40 years age group, as well as the male gender. Also dry eyes was found to have statistically significant association with male gender .Both Conjunctivitis and dry eyes were associated significantly with lower socioeconomic class of the society.(101,102) This corroborates with the fact that unhygienic living conditions , overcrowding and poor nutritional status predisposes to infections and general health of ocular tissues. (99,100)

Chi-square Test of Association was applied between Drug Action Class and Gender. The test was found to be significant only for Anti-histaminics with p-value 0.04. The test was not found to be significant for any other Drug Action Class. This revealed the fact that antihistaminics were prescribed more in males as compared to females . Anti-histaminics are the anti-allergic medications used for allergic disorders of the eyes like allergic conjunctivitis , stye, chalazion , allergic keratitis and uveitis , foreign body irritation and all the patients with complaints of itching and irritation in eyes. So , as we found the significant association of antihistaminics with the male gender, that indicates the incidence of allergic diseases of eyes to be higher comparatively in males. This can be due to more outdoor activities of males , because of occupational exposure and higher exposure to environmental pollution relative to females.

Chi-square Test of Association was applied between Drug Action Class and Socio-economic Strata. The test was not found to be statistically significant for any action class. This indicates that drugs of all classes are being prescribed in patients of all socioeconomic classes.

Also the chi square test of association was done between drug action class and gender of patients. The test was found to be significant only for Anti-histaminics with p-value 0.04. The test was not found to be significant for any other Drug Action Class.

Chi-square Test of Association was applied between Drug Action Class and Age Groups. The test was not found to be significant for any Drug Action Class.

The cost comparison analysis of all medicines given in OPD at our centre showed that 58.8% of medicines prescribed are 1-2 times costlier than cheapest alternative formulations available in the market. 23.5 % medicines are found to be 2-3 times costlier than cheapest alternatives available. Remaining 17.6% medicines are found to be more than 4 times higher priced than the cheapest alternatives available. The costliest drug prescribed was Latanoprost with unit cost of Rs 530 and cost variance range of Rs.417-848. Similarly cheapest drug prescribed was Ciprofloxacin drop with unit price of Rs.18 and cost variance range of Rs.13-88.

The cost of drugs prescribed is a major factor to be considered in middle and lower socioeconomic class of population. The treatment should be cost effective.(22,23) The use of more generic drugs , and appropriate drugs as per the indications, and those from essential list will ensure a cost effective approach . In our study it was found that the average cost of prescription was Rs. 252. The results of the study show that 30.17 percent of patients belong to strata 5 and 30.5 percent of patients belong to strata 4 of socioeconomic scale which means majority of the patients belong to lower economic class of the society. The total per capita

monthly income of this class ranges from Rs 100 to Rs 300. Thus, the treating doctors must prescribe cheaper alternatives of all the medicines available.They must not get influenced by the expensive brands of big pharmaceutical companies. Instead, the generic drugs with good efficacy should be prescribed more. (24) The monopoly of few, costly brands in the market should be discouraged. We also need to generate specific treatment guidelines that take cost into account. Current guidelines often present a list of acceptable treatment options for a given condition, without clear recommendation that guides patients and physicians to choose the most cost-effective option. Physicians must become more educated on drug prices, and discuss affordability with patients .(22)

CONCLUSION

From the observations and results of this study the conclusion which can be drawn hereby is that there has been certain deviations from the standard drug prescribing indicators amongst the prescriptions given at the Ophthalmology department of our institute.

Polypharmacy has been practiced as the average number of drugs prescribed per prescription came out to be above 2, and on the contrary WHO recommends it to be less than or equal to 2. Since polypharmacy increases the risk of drug interactions, the risk of adverse effects, the cost of treatment and also decreases the patient compliance to the treatment , it should be discouraged. The drugs should be prescribed only according to the presenting complaints of the patient. Genuine indications should be considered. It is important to keep the number of drugs per prescription as low as possible.

The percentage of prescriptions with antibiotics is high as compared to the recommendation of WHO which is 20-26.8% , and what we found in our study is 40.61 % .The excessive use of antibiotics will lead to emergence of antimicrobial resistance, which is a great threat to the health of human beings. Therefore, there should be stress on the judicious use of antibiotics as per the indication. Broad spectrum antibiotics should be used cautiously. Oral antibiotics should be used only in severe and systemic involvement.

There should be an increase in the practice of prescribing generic drugs as it reduces the cost of treatment to the patients and India being a developing country where majority of the population is poor and unaffording. WHO recommends 100% prescribing of generic drugs but in our study we found it to be 23.15% , which is quite less, and needs to be taken care of. Generic drug prescribing also ensures minimum prescription errors. The awareness amongst practitioners about the necessity to use generic drugs has to be increased.

The percentage of drugs prescribed from National Essential Drugs List came out to be 59.22%. WHO recommends it should be 100%. Thus, the awareness of essential drugs concept needs to be enhanced in ophthalmologists.

The proper mentioning of dosage instructions, frequency of administration, duration of therapy was not found in some prescriptions which needs to be ensured in each prescription .Prescription writing errors should be minimum.

The present study revealed certain lacunae in the prescribing practices of the Ophthalmology department of our institute which shall be considered to ensure a better health care delivery to the patients in future.

All the above mentioned factors need to be considered and implemented thoroughly in order to promote rational utilisation of drugs in the healthcare setting. The health institutes along with the governments of the country need to revise and enforce the drug policy with the recommended guidelines.

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CASE RECORD FORM

S.No.-

Patient name - Age –

Gender – Occupation –

Education status - Monthly income of Family –

No .of family members -

Socioeconomic scale –

Presenting symptoms –

Diagnosis –

Medicines prescribed –

Prescription details –

1. No.of drugs prescribed –
2. Action class of drugs –
3. No. of antibiotics-
4. No. of injections –
5. Dosage forms – drop ointment tablet syrup injection
6. No. of FDC (Fixed dose combination) drugs -
7. Drug from NEDL (National Essential Drug List) – Yes / No
8. Generic drugs prescribed – Yes / No
9. Doses mentioned in prescription – Yes / No

10. Duration of therapy mentioned – Yes / No

11. Dosage instructions mentioned – Yes / No

12.Covid infection status known – Yes / No

13. Total cost of drugs -

Ethical Clearance Certificate

SANTOSH
Deemed to be University
(Established u/s 3 of the UGC Act, 1956)

F. No. SU/2022/1751[11] Dated: 05.08.2022

Subject: Grant of Ethical Clearance for Thesis Protocol Topic **"Drug Utilisation Study in Ophthalmology Outpatients during Covid Pandemic in a Tertiary Care Teaching Hospital in Delhi NCR"**, submitted by **Dr. Nivedita Thakur,** MD/MS student of Batch 2020-2021, Department of **Pharmacology**.

*****

With reference to his/her request for grant of Ethical Clearance for the Thesis Protocol entitled **"Drug Utilisation Study in Ophthalmology Outpatients during Covid Pandemic in a Tertiary Care Teaching Hospital in Delhi NCR", Dr. Nivedita Thakur** is informed that the Thesis Protocol submitted by him/her was considered by the **Screening Committee** of the Santosh Medical College & Hospital. The recommendations of the **Screening Committee** were considered in detail by the Institutional **Ethics Committee** in its meeting held on **22.07.2022** and the same was **approved** by the **Ethics Committee**.

He /She is informed accordingly for further necessary action.

[DR. ALPANA AGRAWAL]
REGISTRAR

SANTOSH "DEEMED TO BE UNIVERSITY" REGISTRAR GHAZIABAD, NCR DELHI

Dr. Nivedita Thakur,
MD/MS student of batch 2020-2021
Department of Pharmacology
Email: drniveditakapoor@gmail.com

Copy to:

1. The Vice Chancellor
2. The Dean, SMC&H
3. The Dean – Research
4. The Dean – Academics
5. The Director - IQAC
6. Dr. Shaktibala Dutta (Guide)
7. HOD of **Pharmacology**

DATA MASTER CHART

Annexure-III

S. No.	AGE(yrs)	GENDER	Socio-economic scale (Kuppuswamy)	SYMPTOMS	DIAGNOSIS	DRUGS (No.)	DRUGS PRESCRIBED								ANTIBIOTICS (No.)		DOSAGE FORM					FDC	GENERIC DRUGS (No.)	DRUGS FROM FORMULARY	COST OF PRESCRIPTION	Dose Mentioned	Duration	Dosage Instructions	Covid Infection
							Drug	Action Class	Drug	Action class	Drug	Action		Action Class			DRO	OINTME	TABLET	SYRU	INJECTION								
1	4	F	5	Redness	Conjunctivitis	1	Phenylephri	Decongestan	Naphazoline	Decongestant							1					1		1	77	Y	Y	Y	N
2	10	M	5	Discharg	Conjunctivitis	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	Y	Y	N	N
3	38	F	4	Diminution o	Refractive err	1	Carboxymet	Lubricant									1							1	174	N	Y	N	N
4	42	F	3	Discharge , p	Infective Con	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen+	Anti inflammatory			1		2		1			1	1	2	408	Y	N	Y	N
5	15	M	5	Pain in eyes,	Foreign body	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen+	Anti inflammatory			1		2		1			2	1	3	179	Y	Y	Y	Y
6	60	M	5	Discharge , p	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethas	Corticosteroi	Carboxymet	Lubricant			1		2					1		3	246	Y	Y	Y	N
7	5	M	4	Redness in e	Subconjuncti	2	Phenylephrin	Decongestan	Ibuprofen+P	Anti inflammatory							1			1		2		2	141	Y	Y	Y	N
8	11	F	3	Discharge , it	Allergic Conju	3	Phenylephrin	Decongestan	Olopatadine	Antihistamini	Cetirizine	Antihistaminic					2			1		1		2	340	Y	N	Y	N
9	25	M	2	Pain in eyes,	Infective Con	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrin	Decongestant			1		2					2		1	275	Y	N	Y	Y
10	38	M	4	eye strain, it	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	300	Y	Y	N	N
11	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	Y	Y	N	N
12	27	F	5	Redness, dis	Infective Con	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	N	N	Y	N
13	14	M	5	eye strain , h	Refractive err	1	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	N	Y	N
14	25	F	1	Pain in eyes,	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethaso	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		1		1			1		3	183	Y	Y	N	N
15	19	F	2	Pain in eyes,	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ketorolac	NSAID			1		2		1					1	501	Y	Y	Y	Y
16	48	M	1	Itching , poo	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	294	Y	Y	Y	N
17	56	M	4	Diminution o	Refractive err	1	Hydroxymeth	Lubricant										1						2	171	Y	Y	N	N
18	22	M	3	Pain in eyes,	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethaso	Corticosteroi	Ranitidi	H2 Antihis	1		1		2			1		2	140	Y	Y	Y	Y
19	50	F	5	Poor vision, p	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethaso	Corticosteroid			1		2					1	1	1	228	Y	Y	Y	N
20	31	M	4	itching , redn	Allergic Conju	2	Carboxymeth	Lubricant	Olopatidine	Antihistaminic							2							1	394	Y	Y	Y	N
21	34	F	4	eye strain , h	Refractive err	1	Carboxymeth	Lubricant									1							2	174	Y	Y	Y	N
22	16	F	5	redness , dis	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen +P	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
23	72	M	4	poor vision,	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	N	Y	N	N
24	68	M	2	poor visio	Refractive err	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	310	Y	N	Y	N
25	20	F	3	pain in eyes,	Foreign body	2	Ciprofloxacin	Antibiotic	Phenylephrin	Decongestant					1		2					1		2	150	Y	Y	Y	Y
26	7	M	4	pain in eyes,	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethaso	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
27	45	F	3	itching , eye	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	Y	Y	N
28	38	M	5	red nodule i	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
29	23	M	5	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	174	Y	N	Y	Y
30	3	M	5	pain in eyes,	Foreign body	2	Tobramycin	Antibiotic	Ibuprofen +P	Anti inflammatory					1		1			1		1		2	130	Y	Y	N	N
31	53	F	4	watering , po	Refractive err	1	Hydroxymeth	Lubricant										1						1	105	Y	Y	N	N
32	67	F	4	poor vision ,	Refractive err	1	Carboxymeth	Lubricant										1						1	180	N	N	Y	N
33	42	M	4	pain in eyes,	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
34	27	M	3	itching , redn	Dry eyes	2	Carboxymeth	Lubricant	Cetirizine	Antihistaminic							1		1					2	210	Y	Y	N	N
35	36	F	3	redness, disc	Allergic conju	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroi	Levocetirizin	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
36	10	F	1	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
37	75	M	2	poor visio	Diabetic retin	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	306	Y	Y	N	N
38	61	M	4	Pain in eyes,	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker							1					1		2	640	Y	Y	Y	Y
39	24	F	3	redness, disc	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrin	Decongestan	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N
40	18	M	5	eye strai	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
41	4	F	5	Redness	Conjunctivi	1	Phenylephri	Decongestan	Naphazoline	Decongestant							1					1		1	77	Y	Y	Y	N
42	10	M	5	Discharg	Conjunctiv	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	Y	Y	N	N
43	38	F	4	Diminution o	Refractive	1	Carboxymet	Lubricant									1							1	174	N	Y	N	N
44	42	F	3	Discharge , p	Infective Co	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen+	Anti inflammatory			1		2		1			1	1	2	408	Y	N	Y	N
45	15	M	5	Pain in eyes,	Foreign bod	3	Tobramycin	Antibiotic	Phenylephrin	Decongesta	Ibuprofen+	Anti inflammatory			1		2		1			2	1	3	179	Y	Y	Y	Y
46	60	M	5	Discharge , p	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethas	Corticostero	Carboxymet	Lubricant			1		2					1		3	246	Y	Y	Y	N
47	5	M	4	Redness in e	Subconjunct	2	Phenylephrin	Decongestan	Ibuprofen+P	Anti inflammatory							1			1		2		2	141	Y	Y	Y	N
48	11	F	3	Discharge , it	Allergic Conju	3	Phenylephrin	Decongestan	Olopatadine	Antihistamini	Cetirizine	Antihistaminic					2			1		1		2	340	Y	N	Y	N
49	25	M	2	Pain in eyes,	Infective Con	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrin	Decongestant			1		2					2		1	275	Y	N	Y	Y
50	38	M	4	eye strain, it	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	300	Y	Y	N	N
51	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	Y	Y	N	N
52	27	F	5	Redness, dis	Infective Con	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	N	N	Y	N
53	14	M	5	eye strain , h	Refractive e	1	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	N	Y	N
54	25	F	1	Pain in eyes,	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethaso	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		1		1			1		3	183	Y	Y	N	N
55	19	F	2	Pain in eyes,	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ketorolac	NSAID			1		2		1					1	501	Y	Y	Y	Y
56	48	M	1	Itching , poo	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	294	Y	Y	Y	N
57	56	M	4	Diminution o	Refractive er	1	Hydroxymeth	Lubricant										1						2	171	Y	Y	N	N
58	22	M	3	Pain in eyes,	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethaso	Corticosteroi	Ranitidi	H2 Antihis	1		1		2			1		2	140	Y	Y	Y	Y
59	50	F	5	Poor vision, p	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethaso	Corticosteroid			1		2					1	1	1	228	Y	Y	Y	N
60	31	M	4	itching , redn	Allergic Conju	2	Carboxymeth	Lubricant	Olopatidine	Antihistaminic							2							1	394	Y	Y	Y	N
61	34	F	4	eye strain , h	Refractive er	1	Carboxymeth	Lubricant									1							2	174	Y	Y	Y	N
62	16	F	5	redness , dis	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen +P	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
63	72	M	4	poor vision,	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	N	Y	N	N
64	68	M	2	poor visio	Refractive err	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	310	Y	N	Y	N
65	20	F	3	pain in eyes,	Foreign body	2	Ciprofloxacin	Antibiotic	Phenylephrin	Decongestant					1		2					1		2	150	Y	Y	Y	Y
66	7	M	4	pain in eyes,	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethaso	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
67	45	F	3	itching , eye	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	Y	Y	N
68	38	M	5	red nodule i	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
69	23	M	5	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	174	Y	N	Y	Y
70	3	M	5	pain in eyes,	Foreign body	2	Tobramycin	Antibiotic	Ibuprofen +P	Anti inflammatory					1		1			1		1		2	130	Y	Y	N	N
71	53	F	4	watering , po	Refractive err	1	Hydroxymeth	Lubricant										1						1	105	Y	Y	N	N
72	67	F	4	poor vision ,	Refractive er	1	Carboxymeth	Lubricant										1						1	180	N	N	Y	N
73	42	M	4	pain in eyes,	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
74	27	M	3	itching , redn	Dry eyes	2	Carboxymeth	Lubricant	Cetirizine	Antihistaminic							1		1					2	210	Y	Y	N	N
75	36	F	3	redness, disc	Allergic conju	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroi	Levocetirizin	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
76	10	F	1	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
77	75	M	2	poor visio	Diabetic retin	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	306	Y	Y	N	N

78	61	M	4	Pain in eyes,	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker						1					1		2	640	Y	Y	Y	Y
79	24	F	3	redness, disc	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrin	Decongestan	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N
80	18	M	5	eye strai	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
81	4	F	5	Redness	Conjunctivi	1	Phenylephri	Decongestan	Naphazoline	Decongestant							1					1		1	77	Y	Y	Y	N
82	10	M	5	Discharg	Conjunctiv	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	Y	Y	N	N
83	38	F	4	Diminution o	Refractive	1	Carboxymet	Lubricant									1							1	174	N	Y	N	N
84	42	F	3	Discharge , p	Infective Co	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen+	Anti inflammatory			1		2		1			1	1	2	408	Y	N	Y	N
85	15	M	5	Pain in eyes,	Foreign bod	3	Tobramycin	Antibiotic	Phenylephrin	Decongesta	Ibuprofen+	Anti inflammatory			1		2		1			2	1	3	179	Y	Y	Y	Y
86	60	M	5	Discharge , p	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethas	Corticostero	Carboxymet	Lubricant			1		2					1		3	246	Y	Y	Y	N
87	5	M	4	Redness in e	Subconjunct	2	Phenylephrin	Decongestan	Ibuprofen+P	Anti inflammatory							1			1		2		2	141	Y	Y	Y	N
88	11	F	3	Discharge , it	Allergic Conju	3	Phenylephrin	Decongestan	Olopatadine	Antihistamini	Cetirizine	Antihistaminic					2			1		1		2	340	Y	N	Y	N
89	25	M	2	Pain in eyes,	Infective Con	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrin	Decongestant			1		2					2		1	275	Y	N	Y	Y
90	38	M	4	eye strain, it	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	300	Y	Y	N	N
91	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	Y	Y	N	N
92	27	F	5	Redness, dis	Infective Con	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	N	N	Y	N
93	14	M	5	eye strain , h	Refractive e	1	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	N	Y	N
94	25	F	1	Pain in eyes,	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		1		1			1		3	183	Y	Y	N	N
95	19	F	2	Pain in eyes,	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ketorolac	NSAID			1		2		1					1	501	Y	Y	Y	Y
96	48	M	1	Itching , poo	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	294	Y	Y	Y	N
97	56	M	4	Diminution o	Refractive er	1	Hydroxymeth	Lubricant								1								2	171	Y	Y	N	N
98	22	M	3	Pain in eyes,	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasc	Corticosteroi	Ranitidi	H2 Antihis	1		1		2			1		2	140	Y	Y	Y	Y
99	50	F	5	Poor vision, p	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasc	Corticosteroid			1		2					1	1	1	228	Y	Y	Y	N
100	31	M	4	itching , redn	Allergic Conju	2	Carboxymeth	Lubricant	Olopatidine	Antihistaminic							2							1	394	Y	Y	Y	N
101	34	F	4	eye strain , h	Refractive er	1	Carboxymeth	Lubricant									1							2	174	Y	Y	Y	N
102	16	F	5	redness , dis	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen +P	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
103	72	M	4	poor vision,	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	N	Y	N	N
104	68	M	2	poor visio	Refractive err	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	310	Y	N	Y	N
105	20	F	3	pain in eyes,	Foreign body	2	Ciprofloxacin	Antibiotic	Phenylephrin	Decongestant					1		2					1		2	150	Y	Y	Y	Y
106	7	M	4	pain in eyes,	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
107	45	F	3	itching , eye	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	Y	Y	N
108	38	M	5	red nodule i	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
109	23	M	5	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	174	Y	N	Y	Y
110	3	M	5	pain in eyes,	Foreign body	2	Tobramycin	Antibiotic	Ibuprofen +P	Anti inflammatory					1		1			1		1		2	130	Y	Y	N	N
111	53	F	4	watering , po	Refractive err	1	Hydroxymeth	Lubricant								1								1	105	Y	Y	N	N
112	67	F	4	poor vision ,	Refractive er	1	Carboxymeth	Lubricant								1								1	180	N	N	Y	N
113	42	M	4	pain in eyes,	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
114	27	M	3	itching , redn	Dry eyes	2	Carboxymeth	Lubricant	Cetirizine	Antihistaminic							1		1					2	210	Y	Y	N	N
115	36	F	3	redness, disc	Allergic conju	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroi	Levocetirizin	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
116	10	F	1	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
117	75	M	2	poor visio	Diabetic retin	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	306	Y	Y	N	N
118	61	M	4	Pain in eyes,	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker							1					1		2	640	Y	Y	Y	Y
119	24	F	3	redness, disc	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrin	Decongestan	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N
120	18	M	5	eye strai	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
121	4	F	5	Redness	Conjunctivi	1	Phenylephri	Decongestan	Naphazoline	Decongestant							1					1		1	77	Y	Y	Y	N
122	10	M	5	Discharg	Conjunctiv	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	Y	Y	N	N
123	38	F	4	Diminution o	Refractive	1	Carboxymet	Lubricant									1							1	174	N	Y	N	N
124	42	F	3	Discharge , p	Infective Co	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen+	Anti inflammatory			1		2		1			1	1	2	408	Y	N	Y	N
125	15	M	5	Pain in eyes,	Foreign bod	3	Tobramycin	Antibiotic	Phenylephrin	Decongesta	Ibuprofen+	Anti inflammatory			1		2		1			2	1	3	179	Y	Y	Y	Y
126	60	M	5	Discharge , p	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethas	Corticostero	Carboxymet	Lubricant			1		2					1		3	246	Y	Y	Y	N
127	5	M	4	Redness in e	Subconjunct	2	Phenylephrin	Decongestan	Ibuprofen+P	Anti inflammatory							1			1		2		2	141	Y	Y	Y	N
128	11	F	3	Discharge , it	Allergic Conju	3	Phenylephrin	Decongestan	Olopatadine	Antihistamini	Cetirizine	Antihistaminic					2			1		1		2	340	Y	N	Y	N
129	25	M	2	Pain in eyes,	Infective Con	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrin	Decongestant			1		2					2		1	275	Y	N	Y	Y
130	38	M	4	eye strain, it	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	300	Y	Y	N	N
131	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	Y	Y	N	N
132	27	F	5	Redness, dis	Infective Con	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	N	N	Y	N
133	14	M	5	eye strain , h	Refractive e	1	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	N	Y	N
134	25	F	1	Pain in eyes,	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		1		1			1		3	183	Y	Y	N	N
135	19	F	2	Pain in eyes,	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ketorolac	NSAID			1		2		1					1	501	Y	Y	Y	Y
136	48	M	1	Itching , poo	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	294	Y	Y	Y	N
137	56	M	4	Diminution o	Refractive er	1	Hydroxymeth	Lubricant								1								2	171	Y	Y	N	N
138	22	M	3	Pain in eyes,	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasc	Corticosteroi	Ranitidi	H2 Antihis	1		1		2			1		2	140	Y	Y	Y	Y
139	50	F	5	Poor vision, p	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasc	Corticosteroid			1		2					1	1	1	228	Y	Y	Y	N
140	31	M	4	itching , redn	Allergic Conju	2	Carboxymeth	Lubricant	Olopatidine	Antihistaminic							2							1	394	Y	Y	Y	N
141	34	F	4	eye strain , h	Refractive er	1	Carboxymeth	Lubricant									1							2	174	Y	Y	Y	N
142	16	F	5	redness , dis	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen +P	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
143	72	M	4	poor vision,	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	N	Y	N	N
144	68	M	2	poor visio	Refractive err	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	310	Y	N	Y	N
145	20	F	3	pain in eyes,	Foreign body	2	Ciprofloxacin	Antibiotic	Phenylephrin	Decongestant					1		2					1		2	150	Y	Y	Y	Y
146	7	M	4	pain in eyes,	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
147	45	F	3	itching , eye	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	Y	Y	N
148	38	M	5	red nodule i	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
149	23	M	5	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	174	Y	N	Y	Y
150	3	M	5	pain in eyes,	Foreign body	2	Tobramycin	Antibiotic	Ibuprofen +P	Anti inflammatory					1		1			1		1		2	130	Y	Y	N	N
151	53	F	4	watering , po	Refractive err	1	Hydroxymeth	Lubricant								1								1	105	Y	Y	N	N
152	67	F	4	poor vision ,	Refractive er	1	Carboxymeth	Lubricant								1								1	180	N	N	Y	N
153	42	M	4	pain in eyes,	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
154	27	M	3	itching , redn	Dry eyes	2	Carboxymeth	Lubricant	Cetirizine	Antihistaminic							1		1					2	210	Y	Y	N	N
155	36	F	3	redness, disc	Allergic conju	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroi	Levocetirizin	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
156	10	F	1	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
157	75	M	2	poor visio	Diabetic retin	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	306	Y	Y	N	N
158	61	M	4	Pain in eyes,	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker							1					1		2	640	Y	Y	Y	Y
159	24	F	3	redness, disc	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrin	Decongestan	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N
160	18	M	5	eye strai	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
161	4	F	5	Redness	Conjunctivi	1	Phenylephri	Decongestan	Naphazoline	Decongestant							1					1		1	77	Y	Y	Y	N

162	10	M	5	Discharg	Conjunctiv	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2						2	80	Y	Y	N	N
163	38	F	4	Diminution o	Refractive	1	Carboxymet	Lubricant							1		2						1	174	N	Y	N	N
164	42	F	3	Discharge , p	Infective Co	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen+	Anti inflammatory			1		2		1			1	1	2	408	Y	N	Y	N
165	15	M	5	Pain in eyes,	Foreign bod	3	Tobramycin	Antibiotic	Phenylephrin	Decongesta	Ibuprofen+	Anti inflammatory			1		2		1			2	1	3	179	Y	Y	Y	Y
166	60	M	5	Discharge , p	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethas	Corticostero	Carboxymet	Lubricant			1		2					1		3	246	Y	Y	Y	N
167	5	M	4	Redness in e	Subconjunct	2	Phenylephrin	Decongestan	Ibuprofen+P	Anti inflammatory							1			1		2		2	141	Y	Y	Y	N
168	11	F	3	Discharge , it	Allergic Conju	3	Phenylephrin	Decongestan	Olopatadine	Antihistamini	Cetirizine	Antihistaminic					2			1		1		2	340	Y	N	Y	N
169	25	M	2	Pain in eyes,	Infective Con	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrin	Decongestant			1		2					2		1	275	Y	N	Y	Y
170	38	M	4	eye strain, it	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin					1				1					1	300	Y	Y	N	N
171	4	F	5	Redness	Conjunctivi	1	Phenylephri	Decongestan	Naphazoline	Decongestant					1							1		1	77	Y	Y	Y	N
172	10	M	5	Discharg	Conjunctiv	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	Y	Y	N	N
173	38	F	4	Diminution o	Refractive	1	Carboxymet	Lubricant							1									1	174	N	Y	N	N
174	42	F	3	Discharge , p	Infective Co	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen+	Anti inflammatory			1		2		1			1	1	2	408	Y	N	Y	N
175	15	M	5	Pain in eyes,	Foreign bod	3	Tobramycin	Antibiotic	Phenylephrin	Decongesta	Ibuprofen+	Anti inflammatory			1		2		1			2	1	3	179	Y	Y	Y	Y
176	60	M	5	Discharge , p	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethas	Corticostero	Carboxymet	Lubricant			1		2					1		3	246	Y	Y	Y	N
177	5	M	4	Redness in e	Subconjunct	2	Phenylephrin	Decongestan	Ibuprofen+P	Anti inflammatory							1			1		2		2	141	Y	Y	Y	N
178	11	F	3	Discharge , it	Allergic Conju	3	Phenylephrin	Decongestan	Olopatadine	Antihistamini	Cetirizine	Antihistaminic					2			1		1		2	340	Y	N	Y	N
179	25	M	2	Pain in eyes,	Infective Con	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrin	Decongestant			1		2					2		1	275	Y	N	Y	Y
180	38	M	4	eye strain, it	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin					1				1					1	300	Y	Y	N	N
181	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin Analogue							1									1	530	Y	Y	N	N
182	27	F	5	Redness, dis	Infective Con	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	N	N	Y	N
183	14	M	5	eye strain , h	Refractive e	1	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	N	Y	N
184	25	F	1	Pain in eyes,	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		1		1			1		3	183	Y	Y	N	N
185	19	F	2	Pain in eyes,	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ketorolac	NSAID			1		2		1					1	501	Y	Y	Y	Y
186	48	M	1	Itching , poo	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	294	Y	Y	Y	N
187	56	M	4	Diminution o	Refractive er	1	Hydroxymeth	Lubricant								1								2	171	Y	Y	N	N
188	22	M	3	Pain in eyes,	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasc	Corticosteroi	Ranitidi	H2 Antihis	1		1		2			1		2	140	Y	Y	Y	Y
189	50	F	5	Poor vision, p	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasc	Corticosteroid			1		2					1	1	1	228	Y	Y	Y	N
190	31	M	4	itching , redn	Allergic Conju	2	Carboxymeth	Lubricant	Olopatidine	Antihistaminic							2							1	394	Y	Y	Y	N
191	34	F	4	eye strain , h	Refractive er	1	Carboxymeth	Lubricant									1							2	174	Y	Y	Y	N
192	16	F	5	redness , dis	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen +P	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
193	72	M	4	poor vision,	Glaucoma	1	Latanoprost	Prostaglandin Analogue									1							1	530	N	Y	N	N
194	68	M	2	poor visio	Refractive err	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	310	Y	N	Y	N
195	20	F	3	pain in eyes,	Foreign body	2	Ciprofloxacin	Antibiotic	Phenylephrin	Decongestant					1		2					1		2	150	Y	Y	Y	Y
196	7	M	4	pain in eyes,	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
197	45	F	3	itching , eye	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	Y	Y	N
198	38	M	5	red nodule i	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
199	23	M	5	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	174	Y	N	Y	Y
200	3	M	5	pain in eyes,	Foreign body	2	Tobramycin	Antibiotic	Ibuprofen +P	Anti inflammatory					1		1			1		1		2	130	Y	Y	N	N
201	53	F	4	watering , po	Refractive err	1	Hydroxymeth	Lubricant								1								1	105	Y	Y	N	N
202	67	F	4	poor vision ,	Refractive er	1	Carboxymeth	Lubricant								1								1	180	N	N	Y	N
203	42	M	4	pain in eyes,	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
204	27	M	3	itching , redn	Dry eyes	2	Carboxymeth	Lubricant	Cetirizine	Antihistaminic					1		1		1					2	210	Y	Y	N	N
205	36	F	3	redness, disc	Allergic conju	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroi	Levocetirizin	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
206	10	F	1	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
207	75	M	2	poor visio	Diabetic retin	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	306	Y	Y	N	N
208	61	M	4	Pain in eyes,	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker					1							1		2	640	Y	Y	Y	Y
209	24	F	3	redness, disc	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrin	Decongestan	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N
210	18	M	5	eye strai	Refractive err	1	Carboxymeth	Lubricant							1									1	105	Y	Y	Y	N
211	4	F	5	Redness	Conjunctivi	1	Phenylephri	Decongestan	Naphazoline	Decongestant					1							1		1	77	Y	Y	Y	N
212	10	M	5	Discharg	Conjunctiv	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	Y	Y	N	N
213	38	F	4	Diminution o	Refractive	1	Carboxymet	Lubricant							1									1	174	N	Y	N	N
214	42	F	3	Discharge , p	Infective Co	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen+	Anti inflammatory			1		2		1			1	1	2	408	Y	N	Y	N
215	15	M	5	Pain in eyes,	Foreign bod	3	Tobramycin	Antibiotic	Phenylephrin	Decongesta	Ibuprofen+	Anti inflammatory			1		2		1			2	1	3	179	Y	Y	Y	Y
216	60	M	5	Discharge , p	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethas	Corticostero	Carboxymet	Lubricant			1		2					1		3	246	Y	Y	Y	N
217	5	M	4	Redness in e	Subconjunct	2	Phenylephrin	Decongestan	Ibuprofen+P	Anti inflammatory							1			1		2		2	141	Y	Y	Y	N
218	11	F	3	Discharge , it	Allergic Conju	3	Phenylephrin	Decongestan	Olopatadine	Antihistamini	Cetirizine	Antihistaminic					2			1		1		2	340	Y	N	Y	N
219	25	M	2	Pain in eyes,	Infective Con	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrin	Decongestant			1		2					2		1	275	Y	N	Y	Y
220	38	M	4	eye strain, it	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin					1				1					1	300	Y	Y	N	N
221	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin Analogue							1									1	530	Y	Y	N	N
222	27	F	5	Redness, dis	Infective Con	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	N	N	Y	N
223	14	M	5	eye strain , h	Refractive e	1	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	N	Y	N
224	25	F	1	Pain in eyes,	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		1		1			1		3	183	Y	Y	N	N
225	19	F	2	Pain in eyes,	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ketorolac	NSAID			1		2		1					1	501	Y	Y	Y	Y
226	48	M	1	Itching , poo	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	294	Y	Y	Y	N
227	56	M	4	Diminution o	Refractive er	1	Hydroxymeth	Lubricant								1								2	171	Y	Y	N	N
228	22	M	3	Pain in eyes,	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasc	Corticosteroi	Ranitidi	H2 Antihis	1		1		2			1		2	140	Y	Y	Y	Y
229	50	F	5	Poor vision, p	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasc	Corticosteroid			1		2					1	1	1	228	Y	Y	Y	N
230	31	M	4	itching , redn	Allergic Conju	2	Carboxymeth	Lubricant	Olopatidine	Antihistaminic							2							1	394	Y	Y	Y	N
231	34	F	4	eye strain , h	Refractive er	1	Carboxymeth	Lubricant									1							2	174	Y	Y	Y	N
232	16	F	5	redness , dis	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen +P	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
233	72	M	4	poor vision,	Glaucoma	1	Latanoprost	Prostaglandin Analogue									1							1	530	N	Y	N	N
234	68	M	2	poor visio	Refractive err	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	310	Y	N	Y	N
235	20	F	3	pain in eyes,	Foreign body	2	Ciprofloxacin	Antibiotic	Phenylephrin	Decongestant					1		2					1		2	150	Y	Y	Y	Y
236	7	M	4	pain in eyes,	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
237	45	F	3	itching , eye	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	Y	Y	N
238	38	M	5	red nodule i	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
239	23	M	5	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	174	Y	N	Y	Y
240	3	M	5	pain in eyes,	Foreign body	2	Tobramycin	Antibiotic	Ibuprofen +P	Anti inflammatory					1		1			1		1		2	130	Y	Y	N	N
241	53	F	4	watering , po	Refractive err	1	Hydroxymeth	Lubricant								1								1	105	Y	Y	N	N
242	67	F	4	poor vision ,	Refractive er	1	Carboxymeth	Lubricant								1								1	180	N	N	Y	N
243	42	M	4	pain in eyes,	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
244	27	M	3	itching , redn	Dry eyes	2	Carboxymeth	Lubricant	Cetirizine	Antihistaminic					1		1		1					2	210	Y	Y	N	N
245	36	F	3	redness, disc	Allergic conju	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroi	Levocetirizin	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y

246	10	F	1	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1						1	105	Y	Y	Y	N
247	75	M	2	poor visio	Diabetic retin	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1				1	306	Y	Y	N	N
248	61	M	4	Pain in eyes,	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker							1					1	2	640	Y	Y	Y	Y
249	24	F	3	redness, disc	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrin	Decongestan	Multivitamin	Multivitamin			1		2		1			1	2	415	Y	Y	Y	N
250	18	M	5	eye strai	Refractive err	1	Carboxymeth	Lubricant									1						1	105	Y	Y	Y	N
251	4	F	5	Redness	Conjunctivi	1	Phenylephri	Decongestan	Naphazoline	Decongestant							1					1	1	77	Y	Y	Y	N
252	10	M	5	Discharg	Conjunctiv	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2						2	80	Y	Y	N	N
253	38	F	4	Diminution o	Refractive	1	Carboxymet	Lubricant									1						1	174	N	Y	N	N
254	42	F	3	Discharge , p	Infective Co	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen+	Anti inflammatory			1		2		1			1	1	2	408	Y	N	Y	N
255	15	M	5	Pain in eyes,	Foreign bod	3	Tobramycin	Antibiotic	Phenylephrin	Decongesta	Ibuprofen+	Anti inflammatory			1		2		1			2	1	3	179	Y	Y	Y	Y
256	60	M	5	Discharge , p	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethas	Corticostero	Carboxymet	Lubricant			1		2					1		3	246	Y	Y	Y	N
257	5	M	4	Redness in e	Subconjunct	2	Phenylephrin	Decongestan	Ibuprofen+P	Anti inflammatory							1			1		2		2	141	Y	Y	Y	N
258	11	F	3	Discharge , it	Allergic Conju	3	Phenylephrin	Decongestan	Olopatadine	Antihistamini	Cetirizine	Antihistaminic					2			1		1		2	340	Y	N	Y	N
259	25	M	2	Pain in eyes,	Infective Con	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrin	Decongestant			1		2					2		1	275	Y	N	Y	Y
260	38	M	4	eye strain, it	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	300	Y	Y	N	N
261	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	Y	Y	N	N
262	27	F	5	Redness, dis	Infective Con	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	N	N	Y	N
263	14	M	5	eye strain , h	Refractive e	1	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	N	Y	N
264	25	F	1	Pain in eyes,	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		1		1			1		3	183	Y	Y	N	N
265	19	F	2	Pain in eyes,	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ketorolac	NSAID			1		2		1					1	501	Y	Y	Y	Y
266	48	M	1	Itching , poo	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	294	Y	Y	Y	N
267	56	M	4	Diminution o	Refractive er	1	Hydroxymeth	Lubricant								1							2	171	Y	Y	N	N
268	22	M	3	Pain in eyes,	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasc	Corticosteroi	Ranitidi	H2 Antihis	1		1		2			1		2	140	Y	Y	Y	Y
269	50	F	5	Poor vision, p	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasc	Corticosteroid			1		2					1	1	1	228	Y	Y	Y	N
270	31	M	4	itching , redn	Allergic Conju	2	Carboxymeth	Lubricant	Olopatidine	Antihistaminic							2							1	394	Y	Y	Y	N
271	34	F	4	eye strain , h	Refractive er	1	Carboxymeth	Lubricant									1							2	174	Y	Y	Y	N
272	16	F	5	redness , dis	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen +P	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
273	72	M	4	poor vision,	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	N	Y	N	N
274	68	M	2	poor visio	Refractive err	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	310	Y	N	Y	N
275	20	F	3	pain in eyes,	Foreign body	2	Ciprofloxacin	Antibiotic	Phenylephrin	Decongestant					1		2					1		2	150	Y	Y	Y	Y
276	7	M	4	pain in eyes,	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
277	45	F	3	itching , eye	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	Y	Y	N
278	38	M	5	red nodule i	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
279	23	M	5	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	174	Y	N	Y	Y
280	3	M	5	pain in eyes,	Foreign body	2	Tobramycin	Antibiotic	Ibuprofen +P	Anti inflammatory					1		1			1		1		2	130	Y	Y	N	N
281	53	F	4	watering , po	Refractive err	1	Hydroxymeth	Lubricant								1								1	105	Y	Y	N	N
281	67	F	4	poor vision ,	Refractive er	1	Carboxymeth	Lubricant								1								1	180	N	N	Y	N
283	42	M	4	pain in eyes,	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
284	27	M	3	itching , redn	Dry eyes	2	Carboxymeth	Lubricant	Cetirizine	Antihistaminic							1		1					2	210	Y	Y	N	N
285	36	F	3	redness, disc	Allergic conju	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroi	Levocetirizin	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
286	10	F	1	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
287	75	M	2	poor visio	Diabetic retin	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	306	Y	Y	N	N
288	61	M	4	Pain in eyes,	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker							1					1		2	640	Y	Y	Y	Y
289	24	F	3	redness, disc	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrin	Decongestan	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N
290	18	M	5	eye strai	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
291	34	F	4	eye strain , h	Refractive er	1	Carboxymeth	Lubricant									1							2	174	Y	Y	Y	N
292	16	F	5	redness , dis	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen +P	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
293	72	M	4	poor vision,	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	N	Y	N	N
294	68	M	2	poor visio	Refractive err	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	310	Y	N	Y	N
295	20	F	3	pain in eyes,	Foreign body	2	Ciprofloxacin	Antibiotic	Phenylephrin	Decongestant					1		2					1		2	150	Y	Y	Y	Y
296	7	M	4	pain in eyes,	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
297	45	F	3	itching , eye	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	Y	Y	N
298	38	M	5	red nodule i	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
299	23	M	5	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	174	Y	N	Y	Y
300	3	M	5	pain in eyes,	Foreign body	2	Tobramycin	Antibiotic	Ibuprofen +P	Anti inflammatory					1		1			1		1		2	130	Y	Y	N	N
301	53	F	4	watering , po	Refractive err	1	Hydroxymeth	Lubricant								1								1	105	Y	Y	N	N
302	67	F	4	poor vision ,	Refractive er	1	Carboxymeth	Lubricant								1								1	180	N	N	Y	N
303	42	M	4	pain in eyes,	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
304	27	M	3	itching , redn	Dry eyes	2	Carboxymeth	Lubricant	Cetirizine	Antihistaminic							1		1					2	210	Y	Y	N	N
305	36	F	3	redness, disc	Allergic conju	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroi	Levocetirizin	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
306	10	F	1	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
307	75	M	2	poor visio	Diabetic retin	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	306	Y	Y	N	N
308	61	M	4	Pain in eyes,	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker							1					1		2	640	Y	Y	Y	Y
309	24	F	3	redness, disc	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrin	Decongestan	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N
310	18	M	5	eye strai	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
311	34	F	4	eye strain , h	Refractive er	1	Carboxymeth	Lubricant									1							2	174	Y	Y	Y	N
312	16	F	5	redness , dis	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen +P	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
313	72	M	4	poor vision,	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	N	Y	N	N
314	68	M	2	poor visio	Refractive err	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	310	Y	N	Y	N
315	20	F	3	pain in eyes,	Foreign body	2	Ciprofloxacin	Antibiotic	Phenylephrin	Decongestant					1		2					1		2	150	Y	Y	Y	Y
316	7	M	4	pain in eyes,	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
317	45	F	3	itching , eye	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	Y	Y	N
318	38	M	5	red nodule i	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
319	23	M	5	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	174	Y	N	Y	Y
320	3	M	5	pain in eyes,	Foreign body	2	Tobramycin	Antibiotic	Ibuprofen +P	Anti inflammatory					1		1			1		1		2	130	Y	Y	N	N
321	53	F	4	watering , po	Refractive err	1	Hydroxymeth	Lubricant								1								1	105	Y	Y	N	N
322	67	F	4	poor vision ,	Refractive er	1	Carboxymeth	Lubricant								1								1	180	N	N	Y	N
323	42	M	4	pain in eyes,	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
324	27	M	3	itching , redn	Dry eyes	2	Carboxymeth	Lubricant	Cetirizine	Antihistaminic							1		1					2	210	Y	Y	N	N
325	36	F	3	redness, disc	Allergic conju	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroi	Levocetirizin	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
326	10	F	1	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
327	75	M	2	poor visio	Diabetic retin	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	306	Y	Y	N	N
328	61	M	4	Pain in eyes,	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker							1					1		2	640	Y	Y	Y	Y
329	24	F	3	redness, disc	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrin	Decongestan	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N

330	18	M	5	eye strai	Refractive err	1	Carboxymeth	Lubricant								1							1	105	Y	Y	Y	N
331	34	F	4	eye strain , h	Refractive er	1	Carboxymeth	Lubricant								1							2	174	Y	Y	Y	N
332	16	F	5	redness , dis	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen +P	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
333	72	M	4	poor vision,	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	N	Y	N	N
334	68	M	2	poor visio	Refractive err	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	310	Y	N	Y	N
335	20	F	3	pain in eyes,	Foreign body	2	Ciprofloxacin	Antibiotic	Phenylephrin	Decongestant					1		2					1		2	150	Y	Y	Y	Y
336	7	M	4	pain in eyes,	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
337	45	F	3	itching , eye	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	Y	Y	N
338	38	M	5	red nodule i	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
339	23	M	5	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	174	Y	N	Y	Y
340	3	M	5	pain in eyes,	Foreign body	2	Tobramycin	Antibiotic	Ibuprofen +P	Anti inflammatory					1		1			1		1		2	130	Y	Y	N	N
341	53	F	4	watering , po	Refractive err	1	Hydroxymeth	Lubricant										1						1	105	Y	Y	N	N
342	67	F	4	poor vision ,	Refractive er	1	Carboxymeth	Lubricant										1						1	180	N	N	Y	N
343	42	M	4	pain in eyes,	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
344	27	M	3	itching , redn	Dry eyes	2	Carboxymeth	Lubricant	Cetirizine	Antihistaminic							1		1					2	210	Y	Y	N	N
345	36	F	3	redness, disc	Allergic conju	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroi	Levocetirizin	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
346	10	F	1	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
347	75	M	2	poor visio	Diabetic retin	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	306	Y	Y	N	N
348	61	M	4	Pain in eyes,	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker							1					1		2	640	Y	Y	Y	Y
349	24	F	3	redness, disc	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrin	Decongestan	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N
350	18	M	5	eye strai	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
351	4	F	5	Redness	Conjunctivitis	1	Phenylephri	Decongestan	Naphazoline	Decongestant							1					1		1	77	Y	Y	Y	N
352	10	M	5	Discharg	Conjunctivitis	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	Y	Y	N	N
353	38	F	4	Diminution o	Refractive err	1	Carboxymet	Lubricant									1							1	174	N	Y	N	N
354	42	F	3	Discharge , p	Infective Con	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen+	Anti inflammatory			1		2		1			1	1	2	408	Y	N	Y	N
355	15	M	5	Pain in eyes,	Foreign body	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen+	Anti inflammatory			1		2		1			2	1	3	179	Y	Y	Y	Y
356	60	M	5	Discharge , p	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethas	Corticosteroi	Carboxymet	Lubricant			1		2					1		3	246	Y	Y	Y	N
357	5	M	4	Redness in e	Subconjuncti	2	Phenylephrin	Decongestan	Ibuprofen+P	Anti inflammatory							1			1		2		2	141	Y	Y	Y	N
358	11	F	3	Discharge , it	Allergic Conju	3	Phenylephrin	Decongestan	Olopatadine	Antihistamini	Cetirizine	Antihistaminic					2			1		1		2	340	Y	N	Y	N
359	25	M	2	Pain in eyes,	Infective Con	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrin	Decongestant			1		2					2		1	275	Y	N	Y	Y
360	38	M	4	eye strain, it	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	300	Y	Y	N	N
361	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	Y	Y	N	N
362	27	F	5	Redness, dis	Infective Con	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	N	N	Y	N
363	14	M	5	eye strain , h	Refractive err	1	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	N	Y	N
364	25	F	1	Pain in eyes,	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		1		1			1		3	183	Y	Y	N	N
365	19	F	2	Pain in eyes,	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ketorolac	NSAID			1		2		1					1	501	Y	Y	Y	Y
366	48	M	1	Itching , poo	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	294	Y	Y	Y	N
367	56	M	4	Diminution o	Refractive err	1	Hydroxymeth	Lubricant								1								2	171	Y	Y	N	N
368	22	M	3	Pain in eyes,	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasc	Corticosteroi	Ranitidi	H2 Antihis	1		1		2			1		2	140	Y	Y	Y	Y
369	50	F	5	Poor vision, p	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasc	Corticosteroid			1		2					1	1	1	228	Y	Y	Y	N
370	31	M	4	itching , redn	Allergic Conju	2	Carboxymeth	Lubricant	Olopatidine	Antihistaminic							2							1	394	Y	Y	Y	N
371	34	F	4	eye strain , h	Refractive err	1	Carboxymeth	Lubricant									1							2	174	Y	Y	Y	N
372	16	F	5	redness , dis	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrin	Decongestan	Ibuprofen +P	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
373	72	M	4	poor vision,	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	N	Y	N	N
374	68	M	2	poor visio	Refractive err	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	310	Y	N	Y	N
375	20	F	3	pain in eyes,	Foreign body	2	Ciprofloxacin	Antibiotic	Phenylephrin	Decongestant					1		2					1		2	150	Y	Y	Y	Y
376	7	M	4	pain in eyes,	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasc	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
377	45	F	3	itching , eye	Dry eyes	2	Carboxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	Y	Y	N
378	38	M	5	red nodule i	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
379	23	M	5	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	174	Y	N	Y	Y
380	3	M	5	pain in eyes,	Foreign body	2	Tobramycin	Antibiotic	Ibuprofen +P	Anti inflammatory					1		1			1		1		2	130	Y	Y	N	N
381	53	F	4	watering , po	Refractive err	1	Hydroxymeth	Lubricant										1						1	105	Y	Y	N	N
382	67	F	4	poor vision ,	Refractive err	1	Carboxymeth	Lubricant										1						1	180	N	N	Y	N
383	42	M	4	pain in eyes,	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroi	Ibuprofen +P	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
384	27	M	3	itching , redn	Dry eyes	2	Carboxymeth	Lubricant	Cetirizine	Antihistaminic							1		1					2	210	Y	Y	N	N
385	36	F	3	redness, disc	Allergic conju	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroi	Levocetirizin	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
386	10	F	1	Diminution o	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
387	75	M	2	poor visio	Diabetic retin	2	Hydroxymeth	Lubricant	Multivitamin	Multivitamin							1		1					1	306	Y	Y	N	N
388	61	M	4	Pain in eyes,	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker							1					1		2	640	Y	Y	Y	Y
389	24	F	3	redness, disc	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrin	Decongestan	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N
390	18	M	5	eye strai	Refractive err	1	Carboxymeth	Lubricant									1							1	105	Y	Y	Y	N
391	4	F	5	Redness in	Conjunctivitis	1	Phenylephrine	Decongestant	Naphazoline	Decongestant							1					1		1	77	Y	Y	Y	N
392	10	M	5	Discharge	Conjunctivitis	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	Y	Y	N	N
393	38	F	4	Diminution of	Refractive erro	1	Carboxymeth	Lubricant									1							1	174	N	Y	N	N
394	42	F	3	Discharge , pa	Infective Conju	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ibuprofen+ P	Anti inflammatory			1		2		1			1	1	2	408	Y	N	Y	N
395	15	M	5	Pain in eyes, v	Foreign body i	3	Tobramycin	Antibiotic	Phenylephrine	Decongestant	Ibuprofen+ P	Anti inflammatory			1		2		1			2	1	3	179	Y	Y	Y	Y
396	60	M	5	Discharge , po	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethaso	Corticosteroid	Carboxymeth	Lubricant			1		2					1		3	246	Y	Y	Y	N
397	5	M	4	Redness in ey	Subconjunctiv	2	Phenylephrine	Decongestant	Ibuprofen+Pa	Anti inflammatory							1			1		2		2	141	Y	Y	Y	N
398	11	F	3	Discharge , itc	Allergic Conjun	3	Phenylephrine	Decongestant	Olopatadine	Antihistaminic	Cetirizine	Antihistaminic					2			1		1		2	340	Y	N	Y	N
399	25	M	2	Pain in eyes, d	Infective Conju	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrine	Decongestant			1		2					2		1	275	Y	N	Y	Y
400	38	M	4	eye strain, itc	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin							1		1					1	300	Y	Y	N	N
401	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	Y	Y	N	N
402	27	F	5	Redness, disc	Infective Conju	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	N	N	Y	N
403	14	M	5	eye strain , he	Refractive erro	1	Carboxymethy	Lubricant	Multivitamin	Multivitamin							1		1					1	225	Y	N	Y	N
404	25	F	1	Pain in eyes, di	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethasor	Corticosteroid	Ibuprofen +Pa	Anti inflammatory			1		1		1			1		3	183	Y	Y	N	N
405	19	F	2	Pain in eyes, di	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ketorolac	NSAID			1		2		1					1	501	Y	Y	Y	Y
406	48	M	1	Itching , poor	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin							1		1					1	294	Y	Y	Y	N
407	56	M	4	Diminution of	Refractive erro	1	Hydroxymethy	Lubricant								1								2	171	Y	Y	N	N
408	22	M	3	Pain in eyes, di	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasor	Corticosteroid	Ranitidin	H2 Antihista	1		1		2			1		2	140	Y	Y	Y	Y
409	50	F	5	Poor vision, pa	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasor	Corticosteroid			1		2					1	1	1	228	Y	Y	Y	N
410	31	M	4	itching , redne	Allergic Conjun	2	Carboxymethy	Lubricant	Olopatidine	Antihistaminic							2							1	394	Y	Y	Y	N
411	34	F	4	eye strain , he	Refractive erro	1	Carboxymethy	Lubricant									1							2	174	Y	Y	Y	N
412	16	F	5	redness , disc	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrine	Decongestant	Ibuprofen +Pa	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
413	72	M	4	poor vision, p	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	530	N	Y	N	N

414	68	M	2	poor vision	Refractive erro	2	Hydroxymethy	Lubricant	Multivitamin	Multivitamin					1		1		1			1		1	310	Y	N	Y	N
415	20	F	3	pain in eyes, v	Foreign body i	2	Ciprofloxacin	Antibiotic	Phenylephrine	Decongestant					1		2					1		2	150	Y	Y	Y	Y
416	7	M	4	pain in eyes, b	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasor	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
417	45	F	3	itching , eye st	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin					1		1							1	225	Y	Y	Y	N
418	38	M	5	red nodule in	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
419	23	M	5	Diminution of	Refractive erro	1	Carboxymethy	Lubricant									1							1	174	Y	N	Y	Y
420	3	M	5	pain in eyes, v	Foreign body i	2	Tobramycin	Antibiotic	Ibuprofen +Pa	Anti inflammatory					1		1		1		1			2	130	Y	Y	N	N
421	53	F	4	watering , pod	Refractive erro	1	Hydroxymethy	Lubricant								1								1	105	Y	Y	N	N
422	67	F	4	poor vision , h	Refractive erro	1	Carboxymethy	Lubricant								1								1	180	N	N	Y	N
423	42	M	4	pain in eyes, d	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ibuprofen +Pa	Anti inflammatory			1		2		1		1			2	410	Y	N	Y	N
424	27	M	3	itching , redne	Dry eyes	2	Carboxymethy	Lubricant	Cetirizine	Antihistaminic					1		1							2	210	Y	Y	N	N
425	36	F	3	redness, disch	Allergic conjun	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroid	Levocetirizine	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
426	10	F	1	Diminution of	Refractive erro	1	Carboxymethy	Lubricant									1							1	105	Y	Y	Y	N
427	75	M	2	poor vision	Diabetic retino	2	Hydroxymethy	Lubricant	Multivitamin	Multivitamin					1		1							1	306	Y	Y	N	N
428	61	M	4	Pain in eyes, di	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker					1							1		2	640	Y	Y	Y	Y
429	24	F	3	redness, disch	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrine	Decongestant	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N
430	18	M	5	eye strain	Refractive erro	1	Carboxymethy	Lubricant							1									1	105	Y	Y	Y	N
431	4	F	5	Redness in	Conjunctivitis	1	Phenylephrine	Decongestant	Naphazoline	Decongestant					1							1		1	77	Y	Y	Y	N
432	10	M	5	Discharge	Conjunctivitis	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	Y	Y	N	N
433	38	F	4	Diminution of	Refractive erro	1	Carboxymeth	Lubricant							1									1	174	N	Y	N	N
434	42	F	3	Discharge , pa	Infective Conju	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ibuprofen+ P	Anti inflammatory			1		2		1			1	1	2	408	Y	N	Y	N
435	15	M	5	Pain in eyes, v	Foreign body i	3	Tobramycin	Antibiotic	Phenylephrine	Decongestant	Ibuprofen+ P	Anti inflammatory			1		2		1			2	1	3	179	Y	Y	Y	Y
436	60	M	5	Discharge , po	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethaso	Corticosteroid	Carboxymeth	Lubricant			1		2					1		3	246	Y	Y	Y	N
437	5	M	4	Redness in ey	Subconjunctiv	2	Phenylephrine	Decongestant	Ibuprofen+Pa	Anti inflammatory							1			1		2		2	141	Y	Y	Y	N
438	11	F	3	Discharge , itc	Allergic Conjun	3	Phenylephrine	Decongestant	Olopatadine	Antihistaminic	Cetirizine	Antihistaminic					2			1		1		2	340	Y	N	Y	N
439	25	M	2	Pain in eyes, d	Infective Conju	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrine	Decongestant			1		2					2		1	275	Y	N	Y	Y
440	38	M	4	eye strain, itc	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin					1		1		1					1	300	Y	Y	N	N
441	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin	Analogue						1									1	530	Y	Y	N	N
442	27	F	5	Redness, disc	Infective Conju	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	N	N	Y	N
443	14	M	5	eye strain , he	Refractive erro	1	Carboxymethy	Lubricant	Multivitamin	Multivitamin					1		1							1	225	Y	N	Y	N
444	25	F	1	Pain in eyes, di	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethasor	Corticosteroid	Ibuprofen +Pa	Anti inflammatory			1		1		1			1		3	183	Y	Y	N	N
445	19	F	2	Pain in eyes, di	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ketorolac	NSAID			1		2		1					1	501	Y	Y	Y	Y
446	48	M	1	Itching , poor	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin					1		1		1					1	294	Y	Y	Y	N
447	56	M	4	Diminution of	Refractive erro	1	Hydroxymethy	Lubricant								1								2	171	Y	Y	N	N
448	22	M	3	Pain in eyes, di	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasor	Corticosteroid	Ranitidin	H2 Antihista	1		1		2			1		2	140	Y	Y	Y	Y
449	50	F	5	Poor vision, pa	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasor	Corticosteroid			1		2					1	1	1	228	Y	Y	Y	N
450	31	M	4	itching , redne	Allergic Conjun	2	Carboxymethy	Lubricant	Olopatidine	Antihistaminic							2							1	394	Y	Y	Y	N
451	34	F	4	eye strain , he	Refractive erro	1	Carboxymethy	Lubricant									1							2	174	Y	Y	Y	N
452	16	F	5	redness , disc	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrine	Decongestant	Ibuprofen +Pa	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
453	72	M	4	poor vision, p	Glaucoma	1	Latanoprost	Prostaglandin	Analogue						1									1	530	N	Y	N	N
454	68	M	2	poor vision	Refractive erro	2	Hydroxymethy	Lubricant	Multivitamin	Multivitamin					1		1							1	310	Y	N	Y	N
455	20	F	3	pain in eyes, v	Foreign body i	2	Ciprofloxacin	Antibiotic	Phenylephrine	Decongestant					1		2					1		2	150	Y	Y	Y	Y
456	7	M	4	pain in eyes, b	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasor	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
457	45	F	3	itching , eye st	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin					1		1							1	225	Y	Y	Y	N
458	38	M	5	red nodule in	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							1	100	Y	N	Y	N
459	23	M	5	Diminution of	Refractive erro	1	Carboxymethy	Lubricant									1							1	174	Y	N	Y	Y
460	3	M	5	pain in eyes, v	Foreign body i	2	Tobramycin	Antibiotic	Ibuprofen +Pa	Anti inflammatory					1		1			1		1		2	130	Y	Y	N	N
461	53	F	4	watering , pod	Refractive erro	1	Hydroxymethy	Lubricant								1								1	105	Y	Y	N	N
462	67	F	4	poor vision , h	Refractive erro	1	Carboxymethy	Lubricant								1								1	180	N	N	Y	N
463	42	M	4	pain in eyes, d	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ibuprofen +Pa	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
464	27	M	3	itching , redne	Dry eyes	2	Carboxymethy	Lubricant	Cetirizine	Antihistaminic					1		1							2	210	Y	Y	N	N
465	36	F	3	redness, disch	Allergic conjun	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroid	Levocetirizine	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
466	10	F	1	Diminution of	Refractive erro	1	Carboxymethy	Lubricant									1							1	105	Y	Y	Y	N
467	75	M	2	poor vision	Diabetic retino	2	Hydroxymethy	Lubricant	Multivitamin	Multivitamin					1		1							1	306	Y	Y	N	N
468	61	M	4	Pain in eyes, di	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker					1							1		2	640	Y	Y	Y	Y
469	24	F	3	redness, disch	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrine	Decongestant	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N
470	18	M	5	eye strain	Refractive erro	1	Carboxymethy	Lubricant							1									1	105	Y	Y	Y	N
471	4	F	5	Redness in	Conjunctivitis	1	Phenylephrine	Decongestant	Naphazoline	Decongestant					1							1		1	77	Y	Y	Y	N
472	10	M	5	Discharge	Conjunctivitis	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	Y	Y	N	N
473	38	F	4	Diminution of	Refractive erro	1	Carboxymeth	Lubricant							1									1	174	N	Y	N	N
474	42	F	3	Discharge , pa	Infective Conju	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ibuprofen+ P	Anti inflammatory			1		2		1			1	1	2	408	Y	N	Y	N
475	15	M	5	Pain in eyes, v	Foreign body i	3	Tobramycin	Antibiotic	Phenylephrine	Decongestant	Ibuprofen+ P	Anti inflammatory			1		2		1			2	1	3	179	Y	Y	Y	Y
476	60	M	5	Discharge , po	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethaso	Corticosteroid	Carboxymeth	Lubricant			1		2					1		3	246	Y	Y	Y	N
477	5	M	4	Redness in ey	Subconjunctiv	2	Phenylephrine	Decongestant	Ibuprofen+Pa	Anti inflammatory							1			1		2		2	141	Y	Y	Y	N
478	11	F	3	Discharge , itc	Allergic Conjun	3	Phenylephrine	Decongestant	Olopatadine	Antihistaminic	Cetirizine	Antihistaminic					2			1		1		2	340	Y	N	Y	N
479	25	M	2	Pain in eyes, d	Infective Conju	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrine	Decongestant			1		2					2		1	275	Y	N	Y	Y
480	38	M	4	eye strain, itc	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin					1		1		1					1	300	Y	Y	N	N
481	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin	Analogue						1									1	530	Y	Y	N	N
482	27	F	5	Redness, disc	Infective Conju	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	80	N	N	Y	N
483	14	M	5	eye strain , he	Refractive erro	1	Carboxymethy	Lubricant	Multivitamin	Multivitamin					1		1							1	225	Y	N	Y	N
484	25	F	1	Pain in eyes, di	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethasor	Corticosteroid	Ibuprofen +Pa	Anti inflammatory			1		1		1			1		3	183	Y	Y	N	N
485	19	F	2	Pain in eyes, di	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ketorolac	NSAID			1		2		1					1	501	Y	Y	Y	Y
486	48	M	1	Itching , poor	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin					1		1		1					1	294	Y	Y	Y	N
487	56	M	4	Diminution of	Refractive erro	1	Hydroxymethy	Lubricant								1								2	171	Y	Y	N	N
488	22	M	3	Pain in eyes, di	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasor	Corticosteroid	Ranitidin	H2 Antihista	1		1		2			1		2	140	Y	Y	Y	Y
489	50	F	5	Poor vision, pa	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasor	Corticosteroid			1		2					1	1	1	228	Y	Y	Y	N
490	31	M	4	itching , redne	Allergic Conjun	2	Carboxymethy	Lubricant	Olopatidine	Antihistaminic							2							1	394	Y	Y	Y	N
491	34	F	4	eye strain , he	Refractive erro	1	Carboxymethy	Lubricant									1							2	174	Y	Y	Y	N
492	16	F	5	redness , disc	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrine	Decongestant	Ibuprofen +Pa	Anti inflammatory			1		2		1			1		1	225	Y	Y	N	N
493	72	M	4	poor vision, p	Glaucoma	1	Latanoprost	Prostaglandin	Analogue						1									1	530	N	Y	N	N
494	68	M	2	poor vision	Refractive erro	2	Hydroxymethy	Lubricant	Multivitamin	Multivitamin					1		1							1	310	Y	N	Y	N
495	20	F	3	pain in eyes, v	Foreign body i	2	Ciprofloxacin	Antibiotic	Phenylephrine	Decongestant					1		2					1		2	150	Y	Y	Y	Y
496	7	M	4	pain in eyes, b	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasor	Corticosteroid					1		1					1		2	145	Y	Y	Y	N
497	45	F	3	itching , eye st	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin					1		1		1					1	225	Y	Y	Y	N

498	38	M	5	red nodule in	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid				1		2						1	100	Y	N	Y	N
499	23	M	5	Diminution of	Refractive erro	1	Carboxymethy	Lubricant								1							1	174	Y	N	Y	Y
500	3	M	5	pain in eyes, v	Foreign body i	2	Tobramycin	Antibiotic	Ibuprofen +Pa	Anti inflammatory				1		1			1		1		2	130	Y	Y	N	N
501	53	F	4	watering , poo	Refractive erro	1	Hydroxymethy	Lubricant									1						1	105	Y	Y	N	N
502	67	F	4	poor vision , h	Refractive erro	1	Carboxymethy	Lubricant									1						1	180	N	N	Y	N
503	42	M	4	pain in eyes, d	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ibuprofen +Pa	Anti inflammatory		1		2		1			1		2	410	Y	N	Y	N
504	27	M	3	itching , redne	Dry eyes	2	Carboxymethy	Lubricant	Cetirizine	Antihistaminic				1			1						2	210	Y	Y	N	N
505	36	F	3	redness, disch	Allergic conjun	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroid	Levocetirizine	Antihistaminic		1		2		1					2	250	Y	Y	Y	Y
506	10	F	1	Diminution of	Refractive erro	1	Carboxymethy	Lubricant								1							1	105	Y	Y	Y	N
507	75	M	2	poor vision	Diabetic retino	2	Hydroxymethy	Lubricant	Multivitamin	Multivitamin				1			1						1	306	Y	Y	N	N
508	61	M	4	Pain in eyes, di	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker				1							1		2	640	Y	Y	Y	Y
509	24	F	3	redness, disch	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrine	Decongestant	Multivitamin	Multivitamin		1		2		1			1		2	415	Y	Y	Y	N
510	18	M	5	eye strain	Refractive erro	1	Carboxymethy	Lubricant						1									1	105	Y	Y	Y	N
511	4	F	5	Redness in	Conjunctivitis	1	Phenylephrine	Decongestant	Naphazoline	Decongestant				1							1		1	77	Y	Y	Y	N
512	10	M	5	Discharge	Conjunctivitis	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid				1		2							2	80	Y	Y	N	N
513	38	F	4	Diminution of	Refractive erro	1	Carboxymeth	Lubricant						1									1	174	N	Y	N	N
514	42	F	3	Discharge , pa	Infective Conju	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ibuprofen+ P	Anti inflammatory		1		2		1			1	1	2	408	Y	N	Y	N
515	15	M	5	Pain in eyes, v	Foreign body i	3	Tobramycin	Antibiotic	Phenylephrine	Decongestant	Ibuprofen+ P	Anti inflammatory		1		2		1			2	1	3	179	Y	Y	Y	Y
516	60	M	5	Discharge , po	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethaso	Corticosteroid	Carboxymeth	Lubricant		1		2					1		3	246	Y	Y	Y	N
517	5	M	4	Redness in ey	Subconjunctiv	2	Phenylephrine	Decongestant	Ibuprofen+Pa	Anti inflammatory				1					1		2		2	141	Y	Y	Y	N
518	11	F	3	Discharge , itc	Allergic Conjun	3	Phenylephrine	Decongestant	Olopatadine	Antihistaminic	Cetirizine	Antihistaminic		2					1		1		2	340	Y	N	Y	N
519	25	M	2	Pain in eyes, d	Infective Conju	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrine	Decongestant		1		2					2		1	275	Y	N	Y	Y
520	38	M	4	eye strain, itc	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin						1		1					1	300	Y	Y	N	N
521	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin	Analogue							1							1	530	Y	Y	N	N
522	27	F	5	Redness, disc	Infective Conju	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid				1		2							2	80	N	N	Y	N
523	14	M	5	eye strain , he	Refractive erro	1	Carboxymethy	Lubricant	Multivitamin	Multivitamin						1		1					1	225	Y	N	Y	N
524	25	F	1	Pain in eyes, di	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethasor	Corticosteroid	Ibuprofen +Pa	Anti inflammatory		1		1		1			1		3	183	Y	Y	N	N
525	19	F	2	Pain in eyes, di	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ketorolac	NSAID		1		2		1					1	501	Y	Y	Y	Y
526	48	M	1	Itching , poor	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin						1		1					1	294	Y	Y	Y	N
527	56	M	4	Diminution of	Refractive erro	1	Hydroxymethy	Lubricant									1						2	171	Y	Y	N	N
528	22	M	3	Pain in eyes, di	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasor	Corticosteroid	Ranitidin	H2 Antihista		1		1		2		1	2	140	Y	Y	Y	Y
529	50	F	5	Poor vision, pa	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasor	Corticosteroid				1		2				1	1	228	Y	Y	Y	N
530	31	M	4	itching , redne	Allergic Conjun	2	Carboxymethy	Lubricant	Olopatidine	Antihistaminic						2							1	394	Y	Y	Y	N
531	34	F	4	eye strain , he	Refractive erro	1	Carboxymethy	Lubricant								1							2	174	Y	Y	Y	N
532	16	F	5	redness , disc	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrine	Decongestant	Ibuprofen +Pa	Anti inflammatory		1		2		1			1		1	225	Y	Y	N	N
533	72	M	4	poor vision, p	Glaucoma	1	Latanoprost	Prostaglandin	Analogue							1							1	530	N	Y	N	N
534	68	M	2	poor vision	Refractive erro	2	Hydroxymethy	Lubricant	Multivitamin	Multivitamin						1		1					1	310	Y	N	Y	N
535	20	F	3	pain in eyes, v	Foreign body i	2	Ciprofloxacin	Antibiotic	Phenylephrine	Decongestant				1		2					1		2	150	Y	Y	Y	Y
536	7	M	4	pain in eyes, b	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasor	Corticosteroid				1		1					1		2	145	Y	Y	Y	N
537	45	F	3	itching , eye st	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin						1		1					1	225	Y	Y	Y	N
538	38	M	5	red nodule in	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid				1		2							1	100	Y	N	Y	N
539	23	M	5	Diminution of	Refractive erro	1	Carboxymethy	Lubricant								1							1	174	Y	N	Y	Y
540	3	M	5	pain in eyes, v	Foreign body i	2	Tobramycin	Antibiotic	Ibuprofen +Pa	Anti inflammatory				1		1			1		1		2	130	Y	Y	N	N
541	53	F	4	watering , poo	Refractive erro	1	Hydroxymethy	Lubricant									1						1	105	Y	Y	N	N
542	67	F	4	poor vision , h	Refractive erro	1	Carboxymethy	Lubricant									1						1	180	N	N	Y	N
543	42	M	4	pain in eyes, d	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ibuprofen +Pa	Anti inflammatory		1		2		1			1		2	410	Y	N	Y	N
544	27	M	3	itching , redne	Dry eyes	2	Carboxymethy	Lubricant	Cetirizine	Antihistaminic				1			1						2	210	Y	Y	N	N
545	36	F	3	redness, disch	Allergic conjun	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroid	Levocetirizine	Antihistaminic		1		2		1					2	250	Y	Y	Y	Y
546	10	F	1	Diminution of	Refractive erro	1	Carboxymethy	Lubricant								1							1	105	Y	Y	Y	N
547	75	M	2	poor vision	Diabetic retino	2	Hydroxymethy	Lubricant	Multivitamin	Multivitamin				1			1						1	306	Y	Y	N	N
548	61	M	4	Pain in eyes, di	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker				1							1		2	640	Y	Y	Y	Y
549	24	F	3	redness, disch	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrine	Decongestant	Multivitamin	Multivitamin		1		2		1			1		2	415	Y	Y	Y	N
550	18	M	5	eye strain	Refractive erro	1	Carboxymethy	Lubricant						1									1	105	Y	Y	Y	N
551	4	F	5	Redness in	Conjunctivitis	1	Phenylephrine	Decongestant	Naphazoline	Decongestant				1							1		1	77	Y	Y	Y	N
552	10	M	5	Discharge	Conjunctivitis	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid				1		2							2	80	Y	Y	N	N
553	38	F	4	Diminution of	Refractive erro	1	Carboxymeth	Lubricant						1									1	174	N	Y	N	N
554	42	F	3	Discharge , pa	Infective Conju	3	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ibuprofen+ P	Anti inflammatory		1		2		1			1	1	2	408	Y	N	Y	N
555	15	M	5	Pain in eyes, v	Foreign body i	3	Tobramycin	Antibiotic	Phenylephrine	Decongestant	Ibuprofen+ P	Anti inflammatory		1		2		1			2	1	3	179	Y	Y	Y	Y
556	60	M	5	Discharge , po	Keratitis	3	Moxifloxacin	Antibiotic	Dexamethaso	Corticosteroid	Carboxymeth	Lubricant		1		2					1		3	246	Y	Y	Y	N
557	5	M	4	Redness in ey	Subconjunctiv	2	Phenylephrine	Decongestant	Ibuprofen+Pa	Anti inflammatory				1					1		2		2	141	Y	Y	Y	N
558	11	F	3	Discharge , itc	Allergic Conjun	3	Phenylephrine	Decongestant	Olopatadine	Antihistaminic	Cetirizine	Antihistaminic		2					1		1		2	340	Y	N	Y	N
559	25	M	2	Pain in eyes, d	Infective Conju	2	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Phenylephrine	Decongestant		1		2					2		1	275	Y	N	Y	Y
560	38	M	4	eye strain, itc	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin						1		1					1	300	Y	Y	N	N
561	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin	Analogue							1							1	530	Y	Y	N	N
562	27	F	5	Redness, disc	Infective Conju	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid				1		2							2	80	N	N	Y	N
563	14	M	5	eye strain , he	Refractive erro	1	Carboxymethy	Lubricant	Multivitamin	Multivitamin						1		1					1	225	Y	N	Y	N
564	25	F	1	Pain in eyes, di	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethasor	Corticosteroid	Ibuprofen +Pa	Anti inflammatory		1		1		1			1		3	183	Y	Y	N	N
565	19	F	2	Pain in eyes, di	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ketorolac	NSAID		1		2		1					1	501	Y	Y	Y	Y
566	48	M	1	Itching , poor	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin						1		1					1	294	Y	Y	Y	N
567	56	M	4	Diminution of	Refractive erro	1	Hydroxymethy	Lubricant									1						2	171	Y	Y	N	N
568	22	M	3	Pain in eyes, di	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasor	Corticosteroid	Ranitidin	H2 Antihista		1		1		2		1	2	140	Y	Y	Y	Y
569	50	F	5	Poor vision, pa	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethasor	Corticosteroid				1		2				1	1	228	Y	Y	Y	N
570	31	M	4	itching , redne	Allergic Conjun	2	Carboxymethy	Lubricant	Olopatidine	Antihistaminic						2							1	394	Y	Y	Y	N
571	34	F	4	eye strain , he	Refractive erro	1	Carboxymethy	Lubricant								1							2	174	Y	Y	Y	N
572	16	F	5	redness , disc	Conjunctivitis	3	Tobramycin	Antibiotic	Phenylephrine	Decongestant	Ibuprofen +Pa	Anti inflammatory		1		2		1			1		1	225	Y	Y	N	N
573	72	M	4	poor vision, p	Glaucoma	1	Latanoprost	Prostaglandin	Analogue							1							1	530	N	Y	N	N
574	68	M	2	poor vision	Refractive erro	2	Hydroxymethy	Lubricant	Multivitamin	Multivitamin						1		1					1	310	Y	N	Y	N
575	20	F	3	pain in eyes, v	Foreign body i	2	Ciprofloxacin	Antibiotic	Phenylephrine	Decongestant				1		2					1		2	150	Y	Y	Y	Y
576	7	M	4	pain in eyes, b	Keratitis	2	Moxifloxacin	Antibiotic	Dexamethasor	Corticosteroid				1		1					1		2	145	Y	Y	Y	N
577	45	F	3	itching , eye st	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin						1		1					1	225	Y	Y	Y	N
578	38	M	5	red nodule in	Stye	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid				1		2							1	100	Y	N	Y	N
579	23	M	5	Diminution of	Refractive erro	1	Carboxymethy	Lubricant								1							1	174	Y	N	Y	Y
580	3	M	5	pain in eyes, v	Foreign body i	2	Tobramycin	Antibiotic	Ibuprofen +Pa	Anti inflammatory				1		1			1		1		2	130	Y	Y	N	N
581	53	F	4	watering , poo	Refractive erro	1	Hydroxymethy	Lubricant									1						1	105	Y	Y	N	N

582	67	F	4	poor vision , h	Refractive erro	1	Carboxymethy	Lubricant									1					1	180	N	N	Y	N
583	42	M	4	pain in eyes, d	Uveitis	4	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ibuprofen +Pa	Anti inflammatory			1		2		1			1		2	410	Y	N	Y	N
584	27	M	3	itching , redne	Dry eyes	2	Carboxymethy	Lubricant	Cetirizine	Antihistaminic							1		1					2	210	Y	Y	N	N
585	36	F	3	redness, disch	Allergic conjun	3	Ciprofloxacin	Antibiotic	Loteprednol	Corticosteroid	Levocetirizine	Antihistaminic			1		2		1					2	250	Y	Y	Y	Y
586	10	F	1	Diminution of	Refractive erro	1	Carboxymethy	Lubricant							1									1	105	Y	Y	Y	N
587	75	M	2	poor vision	Diabetic retino	2	Hydroxymethy	Lubricant	Multivitamin	Multivitamin					1				1					1	306	Y	Y	N	N
588	61	M	4	Pain in eyes, di	Glaucoma	2	Latanoprost	Prostaglandin	Timolol	Beta blocker					1							1		2	640	Y	Y	Y	Y
589	24	F	3	redness, disch	Conjunctivitis	3	Moxifloxacin	Antibiotic	Phenylephrine	Decongestant	Multivitamin	Multivitamin			1		2		1			1		2	415	Y	Y	Y	N
590	18	M	5	eye strain	Refractive erro	1	Carboxymethy	Lubricant									1							1	105	Y	Y	Y	N
591	70	M	3	Pain in eyes	Glaucoma	1	Latanoprost	Prostaglandin	Analogue								1							1	105	Y	Y	N	N
592	27	F	5	Redness, disc	Infective Conju	2	Ciprofloxacin	Antibiotic	Prednisolone	Corticosteroid					1		2							2	180	N	N	Y	N
593	14	M	5	eye strain , he	Refractive erro	1	Carboxymethy	Lubricant	Multivitamin	Multivitamin							1		1					1	410	Y	N	Y	N
594	25	F	1	Pain in eyes, di	Conjunctivitis	3	Moxifloxacin	Antibiotic	Dexamethason	Corticosteroid	Ibuprofen +Pa	Anti inflammatory			1		1		1			1		3	210	Y	Y	N	N
595	19	F	2	Pain in eyes, di	Uveitis	2	Moxifloxacin	Antibiotic	Loteprednol	Corticosteroid	Ketorolac	NSAID			1		2		1					1	250	Y	Y	Y	Y
596	48	M	1	Itching , poor	Dry eyes	2	Carboxymethy	Lubricant	Multivitamin	Multivitamin							1		1					1	105	Y	Y	Y	N
597	56	M	4	Diminution of	Refractive erro	1	Hydroxymethy	Lubricant										1						2	306	Y	Y	N	N
598	22	M	3	Pain in eyes, di	Corneal ulcer	4	Ciprofloxacin	Antibiotic	Ketorolac	NSAID	Dexamethason	Corticosteroid	Ranitidin	H2 Antihista	1		1		2			1		2	640	Y	Y	Y	Y
599	50	F	5	Poor vision, pa	Pterygium	3	Moxifloxacin	Antibiotic	Ketorolac	NSAID	Dexamethason	Corticosteroid			1		2					1	1	1	415	Y	Y	Y	N
600	31	M	4	itching , redne	Allergic Conjun	2	Carboxymethy	Lubricant	Olopatidine	Antihistaminic							2							1	105	Y	Y	Y	N

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Annexure-V

MODIFIED KUPPUSWAMY SCALE

Education of head of family	Score	Occupation of head of family	Score	Total per capita family income per month (as given originally in 1976)	Score
Professional degree	7	Professional	10	2000 and above	12
Graduate	6	Semi profession	6	RS 1000-1999	10
Intermediate/diploma	5	Clerical/shop/farm	5	RS 750–999	6
High school	4	Skilled worker	4	RS 500–749	4
Middle school	3	Semiskilled worker	3	300-499	3
Primary school	2	Unskilled worker	2	RS 101–299	2
Illiterate	1	Unemployed	1	Less than RS 100	1

Total score	Socioeconomic class
26–29	Upper class
16–25	Upper middle
11–15	Lower middle
5–10	Upper lower
Below 5	Lower

KEY TO ABBREVIATIONS

1. WHO –World Health Organisation
2. INRUD – International Network for Rational Use of Drugs
3. RDU – Rational Drug Use
4. FDA- Food and Drug Administration
5. EMA – European Medicines Agency
6. NEDL- National Essential Drug List
7. STG –Standard Treatment Guidelines
8. AMR – Antimicrobial Resistance
9. MRSA –Methicillin Resistant Staphylococcus Aureus
10. FDC – Fixed Dose Combination
11. AAO – American Academy of Ophthalmology
12. ABHS – Alcohol based Hand Sanitiser
13. COVID 19 – Coronavirus Inflammatory Disease
14. SARS –COV-2 – Severe Acute Respiratory Syndrome Coronavirus 2
15. AMD – Age Related Macular Degeneration
16. AMS –Antimicrobial Surveillance
17. MIC- Minimum Inhibitory Concentration
18. CDSCO – Central Drugs Standard Control Organization
19. NSAID – Non Steroidal Anti-inflammatory Drug
20. OPD – Outpatient Department